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ORIGINAL ARTICLES.

THE TREATMENT OF SUMMER DIARRHEA IN INFANTS.

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ONE who has had clinical advantages among children in New York City during the hot months for several seasons necessarily comes in contact with a large number of cases of summer diarrhea. A brief review of observations made and conclusions arrived at may not be without value to those whose labors are more particularly in other fields.

Intercourse with physicians from various sections of the country, in post-graduate classroom, in consultation and in private practice, demonstrates that the true nature of summer diarrhea in infants is not appreciated by the rank and file of the profession. The erroneous teachings of the past appear difficult to break away from. The popular conception of the management of this disease is to give a dose of castor oil and then by any means possible to diminish the number of the passages, regardless of its effect upon the patient.

The somewhat comprehensive term, summer diarrhea, is used because it covers the subject matter better than any other. A classification founded upon the appearance of the stools is impossible as the appearance often changes from one hour to another. The age of the child, the previous diet, the nature of the infection, the stage of the illness, all influence the character of the passages. A classification based upon the lesion is only possible at the autopsy. At the onset of the illness no lesions exist. Bacteriologic examination of the stool is our only means of classification and our knowledge of the bacteriology of the intestinal contents in summer diarrhea is not very far advanced and for some time to come will not be of avail to the physicians who are treating the great majority of these cases. If they will believe, however, with bacteriologists and clinical workers in diseases of children whose opinions are worth anything, that in summer diarrhea we have a disease due to virulent organisms, much will be accomplished. In a child ill with this disorder we have a child poisoned. There may be a direct infection through the means of contaminated food, infected feeding apparatus, or by any means whereby bacteria may pass into the gastro-intestinal tract.

The extremely acute cases with excessive vomiting, purging, marked prostration and rapid loss of flesh, so-called cholera infantum, are no doubt due to direct infection. The infection may also take place by indirect or autoinfection. The food is unsuitable or given improperly. Indigestion results and a culture-field is prepared. Excessive heat plays a most important part in autoinfection. Through its influence the bodily functions are all depressed, the bile and the digestive juices, the natural disinfectants, are not furnished to the gastro-intestinal tract in the required strength and volume, with the result that the pathogenic organisms always present in the intestine are given an opportunity for vigorous growth and development. The undigested milk at the temperature of the body furnishes an ideal culture medium. We thus have at the commencement of the disorder a poisoning process at work with the contents of the intestine involved and not the intestinal structure.

Summer diarrhea differs from many other ailments of early life in that there is no tendency for it to get well if left to itself. It is a disease which must be treated upon the appearance of the first symptom and treated vigorously. If properly-directed treatment can be carried out promptly we can almost always relieve the patients before the bacteria and their products have produced inflammatory and ulcerative lesions, before grave changes have taken place in the liver and kidneys, organs which are particularly liable to become affected by toxic products in the circulation. Autopsies personally made upon 226 children dying with summer diarrhea show lesions which in extent and severity correspond very closely with the duration of the illness. In intensely toxic cases which die within two or three days, very slight changes are found in the intestines. Small local areas of congestion, a slight swelling of the lymph nodes, with here and there desquamation of the epithelium constitute the changes that have taken place. In prolonged cases which die after two to four weeks illness, ulceration to a considerable extent is to be found.

With the nature of the disease appreciated the rational treatment is simple. It consists chiefly in elimination and diet. Endeavor to remove from the digestive tract the bacteria and their products and to give nourishment which will not furnish a medium for their growth and development. If the case is of the normal type with green, loose stools containing undigested milk and mucus, a teaspoonful of castor oil or one grain of calomel in divided doses

(one-tenth of a grain hourly) should be given. If the case is not seen until two or three days have elapsed and the stools are frequent, from eight to twelve in twenty-four hours, the castor oil should be omitted. A smaller amount of calomel (one-fourth of a grain in one-twentieth-grain hourly doses) is indicated in these active cases. Cases are not infrequently seen in which the stools are infrequent—but two or three in twenty-four hours. The passages are usually very foul and contain a large amount of mucus. There is considerable prostration with low fever. When these symptoms are present active purgation is required and a teaspoonful or two of castor oil should be followed in twenty-four to forty-eight hours by a grain of calomel in divided doses. If vomiting is present neither the castor oil nor the calomel should be given until the vomiting has been controlled by the diet and stomach-washing.

The physician who wishes to do his full duty to the patient must stop the milk diet at once. It matters not whether the diet is breast milk or cow's milk, or whether the cow's milk is sterilized or not sterilized. It matters not whether the milk is peptonized or not peptonized. If the diet is condensed milk, goat's milk, or any of the meal foods containing evaporated milk, they must be discontinued with the first indication of illness. It matters not whether the stools are frequent or infrequent, neither does the character of the stool cut any figure, as long as it shows evidence of intestinal derangement the milk diet must be discontinued. The younger the patient the more imperative the necessity of discontinuing the milk. In some it will not be necessary to keep milk from the child more than twenty-four hours. Others will not be able to take it with safety for weeks. Other nourishment must be substituted and this can be done regardless of the age of the patient. It is useless to give laxatives and wash out the few bacteria and then feed milk to the hosts that remain. The milk is also harmful, although to a lesser extent, in that undigested curds form which pass the entire length of the intestinal tract, causing pain and exciting peristalsis.

If milk is to be discontinued what is to be the diet? The nature of the nourishment and the amount given depend somewhat upon the nature of the case. If there is vomiting as well as diarrhea the stomach must be washed and nothing whatever given for a few hours when a teaspoonful of water may be tried. If the water is retained it may be repeated every fifteen minutes. If it is vomited feeding by gavage¹ should be brought into use. If the water is retained it may be followed by an equal amount of dextrinized barley-water. The next step is to give increased quantities of dextrinized barley-water at long intervals.

If the case is one of diarrhea alone without

vomiting I instruct the mother to give from three to five ounces of the dextrinized barley, either plain or salted, to which is added from one to two ounces of chicken, beef or mutton broth. These may be alternated with a teaspoonful or two of beef juice or one dram of liquid peptonoids which is added to the barley. Children soon tire of any one article of diet other than milk if it is the only nourishment given. The various substitutes suggested to be added to the barley change the taste and its use can be continued for weeks if necessary. The broths must be given cautiously as in some patients they have a decidedly laxative effect.

I have practically discontinued the use of the white of egg in the water. Many children fail to digest it and when such is the case it produces almost as much disturbance as milk. The amount of the diet selected that may be given at one feeding should correspond to the amount in ounces of the nourishment given in health but it should be given at shorter intervals. I allow a child to be fed every two hours if he will take it. If there is much thirst plain boiled water may be given at any time.

For the past year I have been using the barley dextrinized for the reason that if the cereal is predigested a stronger mixture can be taken and just so much more nourishment furnished the patient. If thick, non-dextrinized barley is used, or if a weaker barley or wheat or rice-water is used for a considerable time there is apt to be indigestion, fermentation and colic. My instructions to the mother are as follows: Add two even tablespoonfuls of barley or wheat flour to one pint of water. This is to be boiled twenty minutes and strained, boiled water being added to make the quantity one pint. When the mixture has cooled to the temperature of 100° F. add one teaspoonful of Cereo, which is a preparation of diastase made for this purpose. If barley is used in this strength it will furnish the child a food containing approximately .64 proteids, .15 fat and .4 soluble carbohydrates. If wheat flour is used the mixture will contain approximately .8 proteids, .046 fat and 2.4 soluble carbohydrates.

Upon resuming the milk diet grave errors are often made in giving too strong a milk mixture. The use of milk must not be commenced until the stools are nearly normal with not over three in twenty-four hours. Not more than one teaspoonful of milk should be added to each feeding of the cereal water for the first twenty-four hours. If this is well borne the quantity may be increased one teaspoonful every day. When six teaspoonfuls can be taken without harm the increase may be made at the rate of half an ounce per feeding every two or three days until the customary milk strength is reached. If there is a return of the diarrhea upon using the milk it must be discontinued at once. The mother or nurse must be instructed to do this on their own responsibility. In a few there will be no un-

¹ Gavage in Obstinate Vomiting, Kerley. *Archives of Pediatrics*, February, 1892.

pleasant results if the milk is commenced in from one-fourth to one-third the usual strength. It is a dangerous practice, however, to begin so strong a mixture. Time and again I have known the disease to return in a greatly aggravated form for this reason. After a severe attack of summer diarrhea many children will be able to digest but a very weak milk mixture for the entire summer. Every year we have a few who cannot return to the use of milk in the smallest quantity until October or November. In these cases scraped beef, beef juice and predigested cereals are our main reliance. Occasionally these cases will be able to digest and exist upon proprietary food until the advent of settled cool weather. A teaspoonful or two of one of the soluble proprietary foods may be added to each feeding of the dextrinized barley.

In the breast-fed the attacks are not apt to be so severe and they usually can return to the breast after twenty-four or forty-eight hours.

Among the long list of drugs which have been used and advocated for this trouble there are but few that are worth mentioning. I use practically but four, castor oil and calomel, already referred to, bismuth subnitrate (Squibb's) and opium. Salol, resorcin, the naphthol preparations, so-called intestinal antiseptics, furnish no aid in handling these cases, and are very apt to upset the stomach. The new astringents, tannigen and tanalbin, have a very limited field of usefulness. The disinfection of the intestine in the use of drugs through the means of the drug coming in contact with the bacteria and destroying them is not possible of accomplishment with any drug known at the present time.

The growth and development of bacteria may be prevented, however, by other means than by drug contact. A culture-field must be made as inhospitable as possible. This is best accomplished by withholding the milk diet and in the use of large doses of subnitrate of bismuth—bismuth subnitrate, 12 to 20 grains; aromatic syrup of rhubarb, 3 minims; water to make 1 dram. The addition of the aromatic syrup of rhubarb makes a very palatable mixture. The above amount is given early in a severe case, once in two hours to those less urgent.

Opium should always be given with caution and with special indications. It should never be given when the passages are less than four in twenty-four hours. I rarely give it unless the passages are more than six or seven. It is given only when the passages are very frequent or when they are large and watery. In the cases in which there is considerable fever and prostration, evidence of considerable systemic poisoning, from four to six passages are a benefit. These are to be looked upon as drainage. If this drainage is cut off by the use of astringents and opium the temperature rises, the patient becomes rapidly septic and dies, but the doctor has the satisfaction of having controlled the diarrhea. When opium is to be used I prefer to give it in the

form of Dover powder; from one-fourth to one-half a grain every two or three hours for a child 8 months of age.

The cases already referred to in which there are infrequent foul stools, prostration and stupor require only calomel and castor oil, diet and bowel irrigation. For the fever, packs, baths and sponging are all that are necessary. In case a heart stimulant is necessary avoid alcohol, for the reason that it is very liable to derange the stomach and injure the already overworked kidneys. Strophanthus, strychnine and digitalis may be used as in other diseases when a heart stimulant is necessary. In cases of direct infection, with marked prostration and uncontrollable vomiting a hypodermic of morphine is always of service. For a child one year old 1-100 grain may be given with 1-600 grain atropia.

As with all useful measures irrigation of the colon has been overdone. I fail to understand why a colon that is emptying itself every thirty to ninety minutes requires washing out. If the physician will take the trouble to irrigate one of these active cases after a passage he will find the water returning clear. Irrigation is of the greatest service when the stools are infrequent and foul. It is also useful in active cases, those having from six to eight passages daily, particularly if there is any blood or much mucus. The irrigations are carried out at eight, twelve or twenty-four hour intervals depending upon the nature of the case. As a rule a one-per-cent. boracic-acid solution or a normal salt solution (heaping teaspoonful to the pint) is employed. If the amount of mucus is very large or if the stools contain blood a one-per-cent. solution of tannic acid is used instead. It is well to prepare two quarts of the solution to be used and discontinue when the water returns clear. The temperature of the solution should range between 95° and 100° F., except in cases of high fever where it may be used as cold as 60° F. When the child is moribund and atreptic, with low temperature and low vitality, hot water acts as a decided stimulant.

For irrigation a soft rubber catheter, No. 14 English, one that will not bend on itself if used properly, is attached to a fountain syringe, the bag of which should be held three feet above the patient's bed. The child must lie on the back or left side with legs well drawn up. The tip of the well-oiled catheter is passed into the rectum. When an introduction of two inches has been effected allow the water to pass in slowly. The water will distend the parts and facilitate the further introduction of the tube. Press the folds of the buttocks together until the colon is filled. This in a child of eighteen months of age will require twenty-four to thirty ounces of water. When this or a lesser amount, at least one pint, has passed in allow the solution to run in and out at the same time, the water being forced out alongside the tube.

A word regarding prophylaxis may not be

amiss. It is not enough that the child be given sterilized milk and breast milk; he must be made comfortable. The clothing should be of the lightest and on very hot days he should be in the open air in the shade, if in the country; if in the city, the coolest room in the house or apartment is far better than hot dusty streets. Whether in the city or country two or three fifteen-minute spongings with water at 60° F. will make the child ever so much more comfortable. Further, we know the digestive capacity is lessened during the heated term and the milk should be reduced in strength from one-fourth to one-third on the very trying days, adding water to replace the quantity removed.

The mother should always wash her hands most carefully with soap and hot water before preparing the infant's food, before handling nursing bottle, nipples or any nursing apparatus. The infection may be carried to the feeding utensils by the hands of the mother, other children may become infected, or reinfection take place in the one already ill. A child with summer diarrhea should not come in contact with other young members of the family, for summer diarrhea unquestionably must be placed in the list of communicable diseases.

ON METHODS OF CLOSURE OF ABDOMINAL INCISIONS.¹

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THE methods of suture to be considered in this paper are two, viz., the suture by layers and the so-called through-and-through suture, with a brief description of a combination of both.

The suture by layers may include as many tiers of stitches as there are anatomical strata, or more than one layer may be included in a single tier. For example, there may be a separate line of suture for peritoneum, muscle, fascia, and skin; or, in case of lateral incisions, each muscle may be separately sutured. In the latter case there would be a line of suture each for peritoneum, fascia, transversalis, internal oblique and external oblique muscles, and skin—six in all. In median cuts there would be but three, peritoneum, fascia, and skin; in cuts through the rectus, peritoneum, fascia, muscle, fascia and skin. The tier suture requires, of course, buried material which is either absorbable or non-absorbable. Questions of material, however, are not to be considered in this paper, except as influencing for good or for bad the course of healing. The principle of layer suture is accurate approximation of similar anatomical parts, peritoneum to peritoneum, fascia to fascia, muscle to muscle. A minor principle is the holding of these parts firmly together until they have become too strong to be separated from each other by coughing, vomiting, or other

action of the abdominal muscles. This minor principle is carried out only by the non-absorbable or the slowly absorbed suture material. From the consideration of this point, simple catgut must be excluded. It may be a question whether the non-absorbable suture adds any strength to the scar-tissue from the very fact of its non-absorbability. In connection with the layer suture, methods must be discussed, questions of facility and rapidity of application, of greater or less liability to infection, of tendency to infiltrating hemorrhages, of bursting open of the wound, of ventral hernia.

In the through-and-through suture all the opposing structures are transfixed, at intervals of half an inch or more by the suture material. These sutures, when of absorbable material, may be left to take care of themselves. Usually, however, they are non-absorbable, and are taken out at the end of ten or fifteen days. This method of suturing does not bring about absolute accuracy of approximation to the opposing surfaces. It is a question for discussion whether its accuracy is not sufficient for purposes of firm and permanent union.

The chief virtue of the method of suturing is permanent strength of the union. A permanently strong and inelastic cicatrix depends for its formation first upon aseptic healing. Those methods are to be chosen in the first instance, therefore, which experience in actual operation upon man, rather than theory or even animal experimentation, has shown to be least liable to accidental infections. A second factor of permanent, firm union is said to be the accurate approximation of opposing surfaces, it being assumed that peritoneum joined to peritoneum, fascia to fascia, muscle to muscle, make combined a more solid and enduring cicatrix than, for example, peritoneum to fascia, fascia to muscle, muscle to peritoneum. The practical value of such an approximation is, I think, open to discussion, and permits a difference of opinion. A third and final factor is the strength given the line of union by the use of non-absorbable suture material. The importance of this factor is open to question.

The liability to wound infection, as contrasted in the two general methods, may be considered from the standpoint of theory and from the standpoint of experience. Whatever the deductions from the standpoint of theory or from that of experience, it is clear that the layer-by-layer suture unavoidably leaves dead spaces between the united structures. These spaces, filled with blood or other exudation, are more likely to become infected and, in fact, do more frequently become infected than if these collections did not exist. The blind spaces vary in width according to the dissection, the locality, and the structures themselves. The space between the sutured peritoneum and the next sutured structure, whether fascia or muscle, permits extensive and

¹ Read before the American Surgical Association, Washington, D. C., May, 1900.

easy extravasations, for separation of the peritoneum can be carried to almost any extent. For instance, I have isolated with my fingers the whole peritoneum, first distended with air from its muscular covering, leaving the greater peritoneal cavity as a tense translucent bag. I have seen a hemorrhage from the deep epigastric artery separate the peritoneum upward and backward so extensively that the patient died. I have seen time and again hematomata start up under the peritoneum and in the rectus from perforation of the epigastric vein or artery. This extravasation is at once controlled by the through-and-through suture, if not by one immediately contiguous to the bleeding-point, by one lower down or higher up.

Between the muscles blood makes its way much less easily and collections of fluid are less likely, therefore, to form; so between muscle and fascia, or between fascia and skin. Limited spaces, however, cannot fail to exist between all suture layers, the extent of these spaces depending, as I have said, upon the amount of dissection and upon the locality. When the sheath of the rectus is opened by a longitudinal incision, the spaces are limited only by the liniae transversae and the lateral boundaries of the sheath itself. In median incisions, when the rectal sheath is not opened, the lateral separation is usually insignificant. The frequency of hematomata in wounds apparently dry is by no means inconsiderable. The larger the wound and the more vascular the region, the more likely the extravasation. I have found hematomata especially frequent after breast operations and limb amputations. They are by no means uncommon in dissections about the groin and in the scrotum are a serious complication, therefore, in the radical cure of hernia, hydrocele, and varicocele, at times even resulting in the loss of a testicle.

In the abdominal wound the liability to infiltrating hemorrhages increases with the increase in thickness of the muscular walls. One would, therefore, expect more trouble in the lateral than in median incisions, unless the lateral incision is made through the semilunar line. Pressure cannot be relied upon to check oozing in the abdominal wound, for pressure sufficient to be hemostatic cannot be exerted because of the very structure of the abdomen and its walls.

Wounds distended by fluid exudates are especially liable to suppuration. This statement hardly permits of argument. All wounds are, I believe, unavoidably affected by micro-organisms; but the micro-organism is easily taken care of when the wound is dry. Although it usually runs an aseptic course, even when distended with blood-clot or other exudate, it cannot be depended upon to do so, for the pathogenic organisms reproduce themselves in the confined fluid too rapidly to be taken care of and suppuration ensues. The course of wounds distended by ex-

udates is frequently that outlined by this theoretical consideration. For a day or two the parts are swollen, reddened, and tender. This condition either subsides gradually or becomes more marked. Constitutional signs of infection follow and the wound is found to be suppurating. The usual methods of the radical cure of inguinal hernia require the application of sutures layer by layer. Practically all my suppurating abdominal wounds have followed this operation. They are by no means numerous. Indeed, the number of suppurating abdominal wounds and of ventral herniae has been extremely small, whatever the method of suture.

The through-and-through methods of suture absolutely prevent the formation of hematomata or other localized collections of fluid. Contaminations of such wounds must take place in the tightly-approximated surfaces or in the stitch-holes. Suppuration of such a line of suture is so rare in my experience that it may be said not to exist at all. As I have said, the layer sutures which I use in herniae furnish by far the larger number of infections. As to the value of accurate approximation by layer suturing, there is little to be said except upon theoretical grounds. I have observed many times the strength of long-continued peritoneal approximation. One sees it in inflammatory adhesions between intestines and between parietal and visceral surfaces of the peritoneum. Sometimes they are inseparable, other structures tearing before the peritoneum. In other cases the adhesion is separable even after a year's gluing. I recall an artificial anus formed of the descending colon which I separated easily with my fingers a year after the operation. On the other hand, a year after a lateral anastomosis the intestines were inseparable except by means of a sharp knife. As a matter of fact, some peritoneal surfaces become inseparable and others do not. The firmness of union between peritoneal and other surfaces is not less than between surfaces both of which are peritoneal, as seen frequently after operations in which intra-abdominal surfaces are left uncovered by peritoneum. So, too, when fascia is approximated to muscle there is no good theoretical ground for saying that the resulting cicatrix is not as firm as when the fascia is united to fascia. Indeed, it would seem that a thin edge of fascia united to a thin edge would be more easily separable than a broad layer overlapping another broad layer or overlapping denuded muscle. Clinically the union of fascia is broad and firm in the through-and-through suture. I have cut through many such scars. The cicatricial tissue is dense and firm, much more dense and unyielding in many cases than the original line. As a matter of fact, except perhaps in thick and fat abdominal walls, the through-and-through method gives a reasonably accurate adjustment of opposing layers.

The use of non-absorbable suture material

adds, it seems to me, a certain amount of mechanical strength to the large suture due to the suture material itself. The increased strength due to the paramount fastening together of the parts lasts for some time—long enough to ensure permanence of the cicatrix. Indeed, the wound cannot be separated until the buried sutures have been cut, or until they may have cut themselves loose from the structures which they unite, if they do so at all.

The great efficiency of the buried non-absorbable suture, whether of silver, of silkwormgut, or of silk, seems to me indisputable in that they assure an approximation long enough to make separation of the wound impossible. Furthermore, when structures like fasciae are thus held together, I can see no reason why these sutures should not add a permanent strength, for the material is not absorbed, there is no tendency to its exfoliation, and the enclosed tissues do not escape its grasp after the necessary pressure-absorption has taken place. The question of permanency of binding in connection with suture material is, however, really unimportant, for wound-strength must depend, and does depend, upon the cicatricial rather than upon the mechanical union of opposing surfaces.

This consideration seems to me important in the question of prevention of ventral herniae. I am convinced that early separation of the glued surfaces is a more frequent cause of hernia than the gradual stretching of the linear scar. Coughing, laughing, sneezing, and vomiting have caused the line of suture to give way within a few weeks of the operation or soon after the removal of the interrupted sutures. In such cases the formation of a hernia is due to a violent rending apart of the uniting surfaces, and no method of suturing would prevent it, excepting the burying of non-absorbable suture material, as will be suggested later. Such accidents are even more likely to happen when catgut is used in layer suturing. I have known, for example, of an abdominal incision giving way completely the night after it had been closed by four layers of catgut sutures. I have seen catgut ligatures become untied spontaneously before the completion of an operation. Dr. Jones reported to me recently that the catgut sutures became loose and gave way almost as soon as they were applied.

The rapidity and simplicity of the interrupted suture are self-evident. In surgery, other things being equal, methods which combine simplicity with rapidity are always to be chosen. I have followed Homans' method of applying the suture, threaded at each end and passed from within outward, and I think the fact that stitch-abscesses are practically unknown in my abdominal work is owing to this method.

For material I have used silver wire, silk, and silkwormgut. I used silver wire for several years, 1888-91, for the closure of all external

wounds and for buried sutures. For no especial reason, except perhaps that the application of silver was slow, I began to use silkwormgut for external wounds and silk for buried sutures; these I have used ever since and I see no reason for giving them up.

Silk so seldom causes us trouble that we may say it never does. The cases in which it is exfoliated are a fractional part of one per cent.; I use it everywhere except in septic wounds.

The chief advantages of the through-and-through suture are: (1) Obliteration of dead spaces; (2) rapidity and simplicity of application. The chief advantage of layer suture is prolonged approximation with non-absorbable material. The advantages of both may be united in a very simple combination. This method I have used considerably when, from the size of the wound and from the thickness of the abdominal walls, especial immediate security is desired. By this method I first apply the interrupted sutures. These are placed about half an inch apart throughout the extent of the wound. They are then held tense, the opposing areas being brought together in such a manner that the deeper layers are closely approximated, the outer layers apart. The assistant holds these sutures by their long ends in such a way that no intestine or omentum can get caught between the intra-abdominal loops. The muscle and the fascia are still fully exposed. These are now united by interrupted sutures of silk in one or two layers. I content myself usually with one layer. The layers of peritoneum and fascia are well enough approximated by the long strands of silkwormgut held tense by the assistant. The fascia and the muscle are now united by a single line of interrupted silk sutures. When these are satisfactorily applied, the silkwormgut sutures are one after another tied. In this way no blind spaces are left and the muscle and fascia are united by permanent sutures of silk. I have used this method of suture only in exceptional cases. The more I use the method, the better I like it, and I am inclined to think that sooner or later I shall apply this method to all abdominal wounds.

The formation of ventral hernia after abdominal operations is dependent upon many causes, and the influence of this or that method of suture for good or for bad is, I think, much exaggerated. The frequency of ventral hernia is slight. In five years at the Massachusetts General Hospital there returned for operation only twelve patients with hernia in the scar following aseptic operations. Of these three were umbilical herniae which had recurred after a radical operation—a form of hernia especially liable to recur. In the other nine the wound had been closed by various methods. During the same five years there had been nine ventral herniae admitted after operations performed outside the hospital. Of the hospital cases—some 1580 in number—

only twelve reapplied for operation. Doubtless there were some that were operated upon elsewhere and others that never reported. The number returning to the hospital of the original entry seems to me surprisingly small. So in private operating, the number of operations upon herniae following my own operations and those of others is so small as almost to escape recollection. In three hundred abdominal operations a year, certainly not one per cent. is for ventral hernia.

A potent factor in the formation of ventral hernia is exertion too soon after the operation. I have recently seen a small hernia in a very large cicatrix appearing some two months after hysterectomy for a large fibroid. The patient was continually laughing and joking while at the hospital, and I fully believe she laughed the freshly adherent surfaces apart. In other instances a bronchitis, with violent paroxysmal cough, has started the protrusion. In such cases the method of suture is, in my belief, immaterial, as I have said before, unless the wound is united by buried, non-absorbable sutures.

The influence of thick and fat abdominal walls hardly needs consideration. The opposing surfaces of incision in such walls cannot, from their very nature, form a strong cicatrix. It is in such patients, if any, that buried sutures of non-absorbable material are essential.

Much more important than methods of suture, of material, of careful approximation, are the prolonged abstention from acts which drag upon the scar and tend to draw its opposing surfaces apart, the recumbent position for four weeks in cases naturally prone to hernia or to a recurrence, the radical cure of hernia, the union of long incisions through muscle, all operations upon thick and fat abdominal walls, all wounds in which muscular contractions tend to separate rather than to draw together the opposing surfaces, in fact, all cases of doubtful wound strength. Incisions through the abdominal wall high up do not require the prolonged rest that do those in the lower abdomen.

Another important thing is abstention from labors and exercises which necessitate increased pressure upon the scar tissues; for three months very moderate muscular exercise, beginning with those acts which do not especially use the abdominal muscles should be indulged in. Particular attention must be paid to supporting the wound in attacks of bronchitis with violent coughing. It is well also to advise the patient to support the wound with the hand in coughing and sneezing. The efficiency of abdominal supporters is in my opinion questionable. I always use them, if not for their mechanical, for their moral effect. Moreover, the inference that a hernia results from their non-use is so universal among laymen that the prejudice must be heeded. The chief advantage of an abdominal supporter is in the general aid it affords the abdomi-

nal muscles in supporting the viscera, rather than in any especial strength it gives the scar tissues of the incision. Direct pressure by a pad upon the wound aids in stretching it, especially if the pad is narrow and thick.

The choice of methods of closing incisions and the choice of material must be expected to excite difference of opinion. One surgeon may be unfavorably impressed by one or two bad results following a certain method and condemn it too hastily, returning to a method less efficient perhaps in the hands of others. The consensus of opinion may favor methods which are really faulty and which time alone will demonstrate as faulty. For example, my first suppurating radical operation for hernia followed my first use of kangaroo-tendon, yet I was then, and have been since, favorably impressed by its excellent qualities. On the other hand, the frequent exfoliation of silk seen by some surgeons leads them to condemn its use for buried material; yet I am convinced that the advantages of silk and other non-absorbable material are so great that with renewed experience and with improved asepsis no other will be used.

Sooner or later only that method will prevail which has stood the test of time. The method most likely to stand this test is that which combines with strength simplicity and rapidity of execution.

THE CONSUMPTIVE IN LOS ANGELES.

By WM. H. DUKEMAN, M.D.,
OF LOS ANGELES, CALIFORNIA.

THERE are from ten to twenty thousand tourists who come to Los Angeles annually. I am informed that the greater number come here for their health and remain in this balmy climate a time varying from a few weeks to several months, or a year or two, while many others come here to make this their future home. Among those who are sent here for their health, the phthisical predominate; very many of these are in an advanced stage of the disease, and are too far gone to derive any benefit whatever from climatic influences. It is a very sad mistake to send such persons so far away from their home and friends. Their physicians, knowing that these persons are beyond help from any source, should not accede to the patients' demands to try a change of climate thousands of miles away. Very many such persons arrive here so exhausted from their long journey that it is a very sad sight to see them, sometimes removed, as they are, from the train on a stretcher and taken to their apartments in an ambulance, gasping for breath in the final struggle for a last chance—perhaps only a few days, and then they are returned to distant homes in a casket.

If the consumptive in the early stage of his disease desires to come to California, he should seek the country and not locate in the city, as do the greater majority. It seems that they are under the impression that all that is necessary

for them to do to regain their health, is to get into Los Angeles and then they will get well. Under such a misapprehension they hunt up some cheap lodging-house, a dreary, cold, damp room, without any way of heating except by the abominable kerosine-oil-lamp stove; the apartments infected, perhaps, by some previous unfortunate, who also had a mistaken idea about going to a health resort to regain his health. Los Angeles has scores of such rooming houses, which are really more dangerous than smallpox pest-houses and in such places there are to be found many persons seeking the hoped-for benefits to be derived from a change of climate. Notwithstanding how ridiculous this may appear to the reader, nevertheless it is a fact to be deplored. If such invalids were educated by their physicians at home to avoid the cities and go out in the country, where they would derive the full benefit of a climate, the deplorable affairs above related would not so largely exist.

Los Angeles City should not be considered as a health resort for the consumptive for the following reasons: First, it does not make any pretense to said claims. Second, its sanitary conditions are not such as would warrant such claims. The sewerage system is not what it should be. Los Angeles covers an area a little more than seven miles square. It is yet a young, rapidly-growing city, not having the regulations and care of a city having one-fourth the area. The streets are dirty; they do not have the natural cleansing system, the occasional rains, to wash and carry away the constantly-accumulating filth in the streets. In the business portion of the city the artificial system of flushing, such as are found in the Eastern cities, is not perfected. A few hand-sweepers are scattered over the business portion of the city, but the space that they are obliged to cover to keep clean does not allow them to make even a respectable showing for the hard work done.

While there is an ordinance prohibiting expectorating on the sidewalks and street-cars and public meeting-places, it is not enforced, and the sidewalks in the business portion of the city are never washed, except during the winter months, when an occasional rain does the work. For eight long, dry months it is the same old dust, tossed and re-tossed about from sidewalk to street, and *vice versa*, and, with the aid of women's long-trained dress-skirts, the tuberculous sputum is kept in a pretty active state to disseminate the infection everywhere.

Another grave source of infection is the employment of the consumptive in the various channels of trade, such as clerks in the various retail stores, and most disgusting and abominable are the consumptive cooks and waiters in the many restaurants and eating-houses. The consumptive school-teacher, of which Los Angeles has many, should be absolutely prohibited; some sister cities have taken this step and I am in hopes that Los Angeles will speedily follow. Every teacher who makes application for employ-

ment in the public schools should be subjected to a rigid and thorough physical examination, as well as a microscopical examination of the sputum, before being accepted.

The dairies are inspected and every tuberculous cow is slaughtered; yet scattered all over the resident portion of the city are many tuberculous persons who keep a cow; they do their own milking. As the cow gives more milk than they require for their own use, the surplus is peddled around and sold to their neighbors. As these persons are generally not cleanly in the handling of the milk, I consider this a greater source of spreading the infection than the same method of spreading typhoid fever. This should be prohibited.

For the benefit of the public, as well as of the consumptive who chances to come under my care for treatment, I impress upon him the necessity of living in the country and, if he desires to get well, he must of necessity give up his time to the work of getting his health. To all such patients I supply written or printed rules or general advice, that they may not forget their duty to themselves, as well as to others.

The following is a copy:

General Advice.

1. You must live in the country and there make every effort to try to get well.
2. A patient who tries to get well has ten times as many chances of getting well as the one who is careless and indifferent.
3. You must avoid worry, anxiety and excitement.
4. Be hopeful and cheerful, for your disease can be cured if you will but do your duty in strictly following the advice here given.
5. As a rule, do not leave the house during the winter months until one hour after sunrise. Live out-of-doors all day. Remain in-doors only on rainy and very windy days. Remain in the sunshine as much as possible, and a greater part of the time recline on a couch or in a hammock in a comfortable position; protect your head from the sun's rays, the rest of the body lying bathed in the warm rays of the sun.
6. Always breathe through the nose and take your breathing-exercises regularly, as I have instructed you.
7. Avoid dust as you would rain and dampness and all places where the air is bad, such as theaters, concert-halls, or any crowded meeting-place, and lodging-houses.
8. Take your walking exercises regularly as prescribed, but never walk when you are tired or when you have a high fever (temperature 100° F. or over).
9. Dress neatly. Be clean and comfortable, but never wear a chest protector, as they are injurious; wear woolen undergarments as well as woolen socks and thick-soled shoes to keep your feet warm and dry.
10. Never stay or sleep in an overheated room. In this climate, however, in the mornings and evenings during the winter months, you should

have a small fire to keep your sitting-room comfortably warm, at about 65° to 68° F. Do not heat your room with an oil stove.

11. Never use your sleeping-room as a sitting-room. Keep all the windows open in your sleeping-room all day long and one window open all night. On cold evenings close the windows a little before sundown and then when you go to bed open one window, for you must have fresh air while you sleep. Fresh night-air is as good for you while you sleep as is day-air while you are awake.

12. Retire every night before 9 o'clock. Have at least nine hours sleep; when thoroughly rested, get up any time after 7 A. M.

13. Never expectorate any place where it can dry. Indoors always expectorate in a spittoon which is partially filled with water containing some antiseptic in solution, such as carbolic acid (teaspoonful to pint of water) or some other antiseptic. When you cannot conveniently get to the spittoon, use your pocket-flask. Never swallow your expectoration. Never expectorate in your handkerchief, nor use the same handkerchief to wipe your nose which you have used to wipe your mouth. Always cover your mouth with your handkerchief while coughing or sneezing. Never cough while at the dining-table; by a little effort you can suppress the cough.

14. Never kiss anyone, for your disease is infectious.

15. Keep your teeth clean by brushing them after each meal and use your mouth- and nose-wash night and morning, as advised.

16. Take a warm bath twice a week, to be followed by a rapid sponging with cooler water and a vigorous rubbing with a rough towel. If you are too weak to do the latter and you do not have an attendant, rub your entire body with alcohol.

17. Never use tobacco in any form. Never use any alcoholic beverages without the special directions of your physician.

18. Coax your appetite with a varied nutritious diet, as per diet-list given, and eat all you possibly can. A good nutritious diet, plenty of fresh air and sunshine are the best medicines.

19. Should there be any intercurrent symptoms, such as indigestion, diarrhea, constipation, restless nights, increased cough, pain, blood-streaked expectoration, do not be alarmed, but notify your physician without delay.

20. By carefully following the above instructions, as well as the advice given you at the office, the chances of your getting well are *greatly* in your favor.

In the past I had placed more or less faith in certain drugs as curative agents in this disease; I have tried them all, have found them all wanting, and am convinced that no one remedy is anything near a specific, and the serum treatment less valuable than any. My main hopes are to induce the patient to go and live in the country, treat symptoms as they arise, eat plenty of easily digestible nutritive food, especially milk, eggs and beef. One patient who ate as many as ten

to twelve eggs daily for months recovered without any medicine other than a digestive mixture. I insist on patients living an easy, regular life in the open air and sunshine. In fact, if I can impress them with the absolute necessity of giving up everything else and employ themselves in taking every precaution against negligence and using every effort in trying to get well, improvement generally follows.

ADDRESSES.

THE EVOLUTION OF THE MODERN PHYSICIAN.¹

By WILLIAM ALFRED ELLISTON, M.D.,

OF IPSWICH, ENGLAND;

SENIOR SURGEON, EAST SUFFOLK AND IPSWICH HOSPITAL.

It is twenty-six years since this great Association met in East Anglia in the city of Norwich and it speaks for its ever-growing importance and utility that on that occasion there were some 6000 members only, and the scientific business of the meeting was conducted in four sections. On this occasion, the first meeting of the nineteen hundreds, the members have increased to over 18,000, of whom 4000 are members of our Colonial Branches, and the scientific work needs thirteen sections.

Since the last annual meeting this Association has lost two members of great distinction, one full of years, "who had labored well far into the evening of life"; and the other cut short in his career, but yet with a record of great distinction. All who were present at the Edinburgh meeting in 1898 will remember the cordial hospitality of the President, Sir Thomas Grainger Stewart, and the conspicuous ability with which he conducted the business of that large gathering. In the death of Sir James Paget the profession has lost one of the greatest and most philosophic surgeons of the age, and East Anglia one of her most illustrious sons. His high character and great learning alike endeared him to the whole profession. His early scientific contributions, and particularly his discovery of the trichina spiralis in muscle, while yet a student at St. Bartholomew's, gave promise of a career which has been fully realized.

Reflecting with mixed feeling upon this experience, I propose to-night to briefly touch upon some incidents in the developments of the science of British medicine and the evolution of the modern physician. I use the term physician in its broadest sense of the type, now considered an ideal one, as illustrated in literature by the rare delineature of Dr. Lydgate by George Eliot in "Middlemarch," and of Dr. Maclure by Ian Maclaren in "Beside the Bonnie Brier Bush," and as admirably portrayed in art by Mr. Luke Fildes in his strikingly pathetic picture of "The Doctor."

¹ President's Address, delivered at the Sixty-eighth Annual Meeting of the British Medical Association, August 1, 1900. (Abstract.)

Down to the period of the commencement of the sixteenth century England had taken no share in the scientific advancement of the Continent, and for almost a hundred years later no discovery of any importance was due to English research, the profession was busy as a whole in acquiring protection for their rights and privileges.

The continuous progress of British science commenced with the return of Thomas Linacre to Oxford from the Italian universities, whence he came imbued with what was termed the "new learning," then recently introduced by the Greek professors, who had been attracted to Italy. At this time the learned of all countries were profoundly impressed by the recent discovery of America, by the scientific discoveries of such men as Copernicus and Paracelsus. The printing press was changing the conditions of life, and literature became the common property of all.

The great event in the sixteenth century, so far as medicine is concerned, was the success of Thomas Linacre in persuading the King to grant a charter to a small body of medical graduates, who were thenceforth called the Royal College of Physicians. He succeeded, it is said, principally through the great and powerful help of Cardinal Wolsey. The charter of the Royal College of Physicians was granted September 23, 1518. It gave them the sole power to license to practice physic in London or within seven miles radius, with other privileges, which were confirmed by a statute of Henry VIII., and extended to the whole of England. Linacre was the first President, and he held office to the end of his life.

In 1540 the Barbers and Surgeons were united by Act of Parliament 38 Henry VIII., cap. 42. They were incorporated as the "Maisters or Governors of the Myserie and Commonalitie of Barbers and Surgeons of London." Thomas Vicary, Sergeant Surgeon to Henry VIII., who had been previously Master of the Barbers' Company, was the first Master of the combined companies. The company employed Holbein to paint a picture with the King on his throne, with his two physicians, Sir William Butts and Dr. John Chantre, with his apothecary kneeling on his right, presents the Act, which is painted with a seal as if it were a charter to Vicary, who, with fourteen other Barbers and Surgeons, is on his knees. In 1543 the irregular practitioners of London were protected by Act, and became one of the corporations of that city, and both by royal charters and by Acts of Parliament exercise the power of granting license to practice medicine. In 1505 the Royal College of Surgeons of Edinburgh was founded, and in 1599 the Faculty of Physicians and Surgeons of Glasgow.

Soon after the birth of the new learning, the work of Vesalius, the brilliant young Belgian, aided by his contemporaries Fallopius and Eus-

tachius, raised anatomy to a science based upon the dissection of the human body itself, in addition to that of animals.

In the sixteenth century there were already established physicians, surgeons, and apothecaries. The surgeons were associated in their Guild with the barbers and the apothecaries with the grocers. While the physicians were men of education, cultured according to the education of the time, the surgeons and apothecaries were not a very highly educated class, and they remained so, with few exceptions, until the rise of the nineteenth century.

It was at the very commencement of the seventeenth century that the original research of two great English physicians, Gilbert and Harvey, completely altered the position of our country in scientific advance. Hitherto there had been no contribution of importance; from this time, however, a complete change came over the scene; and from that day to this our countrymen have taken a conspicuous part in the solution of the many scientific problems and discoveries of the last three centuries. Our East Anglian county of Essex has the honor to be the birthplace of one of these illustrious physicians and the resting place of both. William Gilbert was born and buried at Colchester. At Holy Trinity Church there is a monument to his memory. He died unmarried, at the early age of 57, in 1603. William Harvey died in 1657, and was buried at Hempstead, in the same county, in his 80th year.

In relation to the fame of Gilbert and his researches, the poet Dryden wrote:

"Gilbert shall live till loadstones cease to draw."

At the time of Gilbert's death there were three men living, all in the prime of life, who profoundly stirred the scientific world—Francis Bacon, afterwards Lord Bacon, was 42 years of age, and was representing Ipswich in Parliament; Galileo, 39 years of age, and had recently brought distant worlds into view with the telescope; and William Harvey, the discoverer of the circulation of the blood, was 25 years of age.

The microscope was as yet undiscovered. The number of pulse beats was not measured by a watch until nearly a century after Harvey's time. In his day, according to Dr. Norman Moore, physicians contented themselves with estimating the character of the pulse rather than its precise rate. Specialism as now understood did not exist, and Harvey was a surgeon as well as a physician. He performed surgical operations to which he frequently refers. The brilliant work of Galileo, Gilbert, and Harvey, the awakening philosophy of Francis Bacon in this country and Descartes in France, gave an impetus to original research and the investigation of causes that was remarkable in upsetting ancient traditions, and little by little real observation and experiment took the place of mere authority.

It was about this time that a small body of

students assembled at Oxford in 1645, who were later, in 1662, to be known as the Royal Society. It was established as an association of men interested in the development of mathematical and physical science. It is the oldest scientific society in Great Britain and one of the oldest in Europe. Italy had already established two societies in the time of Galileo and Torricelli. In Germany the Imperial Academy of the Curious in Nature was founded in 1662. The famous French Academy of Science in 1666 was legally established by the French Government. All these societies greatly influenced scientific research, and many men who were hitherto unable to publish, now read papers at their meetings.

Practical medicine in Great Britain was developing in this country; a pharmacopoeia had been issued; cinchona bark was introduced; botanical gardens were established. The teachings of Francis Lord Bacon, and subsequently John Locke, influenced the direction of thought, while the great learning and superb common sense of that great physician, Sydenham, gave effect to the general advance of this period.

In surgery the growth was slow, principally through the general want of knowledge of anatomy acquired by dissection; but two Englishmen had distinguished themselves in this branch—Nathaniel Highmore and Thomas Wharton—the former discovering the cavity in the superior maxillary bone which is still known by his name; and Thomas Wharton, who discovered the duct of the maxillary gland which is still recognized as Wharton's duct.

The man who of all others at the early part of the eighteenth century gave an impetus to medical education was the illustrious Boerhaave, who at the University of Leyden attracted students from all parts, and particularly from this country. He was elected Lecturer in 1701, and a few years later occupied the Chair of Chemistry. He shares with Dr. Hales, the great English chemist, the honor of founding the science of organic chemistry. So highly was Boerhaave esteemed by his fellow-countrymen that upon his recovery from a serious illness in 1722 there was a general illumination of the town of Leyden.

In London there was no concrete medical school until quite late in the century. William Hunter came to London and commenced to lecture in 1747, he became a member of the Corporation of Surgeons, was appointed Obstetric Physician to the Middlesex Hospital in 1742. He is stated to have been an early riser and a man of untiring energies. He was undoubtedly the first great teacher of anatomy in London, and we owe his selection and advance to Dr. James Douglas, an anatomist and obstetrician whose name is associated to this day with modern anatomists as the discoverer of Douglas pouch.

The advancement of medicine and the allied sciences in the eighteenth century commenced

with the contributions of Boerhaave and Hales in organic chemistry, while Buffon taught natural history, and the Swede Linnaeus patiently worked out the minute characters of animals and plants. In physics the Scotch physician Black proved the amount of heat dormant in water and steam, which Watt afterwards applied to the steam engine. Electricity was greatly advanced by Benjamin Franklin, the American, who attracted lightning from the sky and worked with it in his own laboratory. Galvani found the wonderful power hidden in the nerves of the frog, and Volta showed how powerful electricity could be produced by two metals placed in acid and water, and this could be carried along a wire of any length which touches the battery at both ends. In physiology great advances were made by Haller, Bonnet, and Spallanzani. John Hunter, by his untiring energy, industry, and perseverance, founded the science of comparative anatomy, and as an anatomist and as a practical surgeon built himself an everlasting fame.

The most remarkable scientific advance was undoubtedly in the science of chemistry. Almost to the last quarter of the century the theory of "phlogiston" had confused and mystified the researches of the many great and distinguished scientists who had worked in this direction. It is highly satisfactory the important part played by our countrymen in the elucidation of truth. The discovery of the gases which enter into the combination of air, water, and fire transferred the alchemy of old into the modern science of chemistry. It was due to the discovery of Black, Priestley, and Cavendish, and the independent work on similar lines of the great Swedish chemist, Schiël—himself a practising apothecary—that enabled Lavoisier to recognize the value of their discoveries and proclaim their effects upon science in his "Elements of Chemistry." At the early age of 51 this philosophical chemist was guillotined by his countrymen in 1794 during the French Revolution.

Black discovered carbonic acid in 1756, Cavendish hydrogen in 1766, Rutherford nitrogen in 1772; and it was not until 1774 that Priestley—a Nonconformist minister at Leeds—discovered oxygen. It was also independently discovered by Schiël in 1775. They both deserve credit. Priestley's discovery was made with red oxide of mercury; he heated it and found that a gas came off, which he collected and he experimented with two mice, and he found that they breathed it and lived much longer than in ordinary air; then he breathed it himself, and found he felt singularly light and easy for some time after. "Who can tell," he writes, "whether this pure air may not become a fashionable luxury. As yet, only two mice and myself have had the privilege of breathing it." It is only of recent years that the great value of the inhalation of oxygen gas has been recognized and utilized in the treatment of certain diseases of the heart

and lungs. I think many of us could bear testimony to its life-saving properties in cases which appeared hopeless.

The education of Edinburgh was far ahead of London. Medical societies and periodicals flourished there before coming south. There were medical societies in Edinburgh as far back as 1720. In London there were societies of 1753 and 1764; they were both small societies, and disappeared after Hunter's death. The only medical society in England, outside London, was the Medical Society of Colchester, founded in 1774. The absence of societies was much felt by earnest practitioners desirous of progress. Dr. Edward Jenner belonged to a medical society which met at the Fleece Inn, Rodburgh. Papers were read on medical subjects, and the members afterwards dined together. At these meetings Jenner read papers on various subjects. He also belonged to another society, which met at the Ship Inn, Alveston.

In London in 1783 there were five lecturers in anatomy, three lecturers on surgery, and three lecturers on the practice of medicine. The great medical schools of London and of the provinces have almost all been established since this period, and indeed most of them in the present century, as well as many of the useful universities now existing in the United Kingdom. Learned societies in medicine from this time became established, and they now exist in all parts of the kingdom.

The eighteenth century closed with an immense advance all round in general science, and particularly in chemistry and electricity. The last two years were distinguished by remarkable observations in physics upon the nature of heat; when Count Rumford boiled water and Dany melted ice by friction. The nineteenth century opened with a galaxy of talent devoted to scientific investigation in almost every department, which has resulted in great benefits to all knowledge. At the commencement of the century there was no illumination by gas or electricity, no ignition by lucifer matches; there was no railway or steamboat communication by land or sea; there was no electrical communication by telegraph or telephone, no electric light, no anesthetics, no sun pictures, no knowledge of the intimate connection between electricity and chemical change. The century had but just turned when Sir Humphry Davy, then a very young man, gave brilliantly in rapid succession the discovery of nitrous oxide gas, electrolysis, the discovery of the metals potassium and sodium, the safety-lamp, and with Wedgwood the possibility of sun pictures. Dalton gave his atomic theory to chemistry, Malus the polarization of light, Ritter the chemical rays, Sir W. Herschell his dark heat rays, Young his valuable contribution to light, Oersted and Faraday their observation on electric magnetism. The French school, with Cuvier, Lamarck, and St.

Hilaire, greatly advanced physiological science; while a little later, in the year 1832, Liebig discovered chloral and chloroform, and among his other herculean labors in various directions he added to our knowledge of organic chemistry by tracing the changes which food undergoes in our bodies, and studied which kinds are converted into fats, muscle, blood, or sugar in our system.

Of the physicians and surgeons in active practice there were many of great distinction; Lettsom, Matthew Baillie, Edward Jenner, James Gregory the younger, Edward Rigby, Cline, Abernethy, Sir A. Cooper, Sir Charles Bell, and many others of scarcely less eminence. Auscultation was then unknown in this country; Avenbrugger, of Vienna, had in 1761 published his work recognizing diseases of the chest by percussion; his ideas were ridiculed until 1808, the year preceding his death, when Corvisart translated it into French, and it rapidly attained a European reputation. Quickly following in 1816 Laennec, a French army doctor, invented the stethoscope and published his "*Traité de l'Auscultation Médicale*." Edward Rigby, Sheriff of Norwich in 1802, had recently published his work "*On Uterine Hemorrhage*," which made him famous at home and abroad. Bancroft, who left England to settle in Jamaica, in 1811, published his "*Essays on Yellow Fever*"; and of these Murchison says: "In his '*Continued Fever*' no work ever effected a greater revolution in professional opinion in this country." The spontaneous or autochthonous origin of pestilential disease was then the generally accepted one, though the doctrine now prevalent of the continuous reproduction of a virus existing ab externo had been stated in the most precise terms by Eggerden, a Prussian physician, as early as 1720.

The ever-growing importance of surgery as a special science is recognized to the full at the present day. The long roll of eminent surgeons of later days commenced with several distinguished pupils of John Hunter. In the early part of the century there were three surgeons then practising who exercised an enormous influence at the time—Abernethy, Astley, Cooper, and Charles Bell. Abernethy was four years senior to Cooper, and Charles Bell six years younger. Of them both Abernethy and Cooper had great fame as lecturers and bold and philosophic surgeons. The former was the founder of the distinguished school of St. Bartholomew's while the latter was the surgical hero of the Borough United Hospitals until his succession to the school of Guy's Hospital, which thenceforth became a separate and distinct school from that of St. Thomas's.

The important legislation of the nineteenth century was the Apothecaries Act of 1815. This Act has been proved to be one of the greatest boons ever conferred upon the medical profes-

sion, and whatever may be the sentimental objection to a learned profession being connected with traders, we are bound to remember that to those who sought the Act of 1815 we are indebted for a reform which has been far reaching in its results. Previous to this Act the education of the medical practitioners of England and Wales was entirely optional on their part, and although many of them possessed degrees or licenses of the Universities or Colleges, the greater number possessed no such qualification, and many of them were wholly illiterate or uneducated. About the year 1850, a preliminary examination in arts was instituted as a necessary and independent requirement before proceeding to the medical curriculum. In 1858 the Medical Act became law, and by this Act the L. S. A. of London was permitted to practice through Scotland or Ireland. The Apothecaries Amended Act passed into law in 1872. Women were admitted to practice in 1876. In 1878 the pharmaceutical chemists were licensed by Act.

This increased desire for knowledge of anatomy and surgery had a remarkable effect at the time. At the early part of the century, with some few exceptions, very few surgeons, even of large hospitals, had personally dissected the human body; and the demand then for subjects became so great that a disreputable association had to be entered into between the teachers of anatomy and a class of men who were termed "Resurrectionists" to supply them with subjects. The sums paid to these body-snatchers was frequently exorbitant, and a scandal arose which at the time created a great sensation, as, in addition to the many indecencies undoubtedly committed, it was alleged that murders were incited. The excitement was happily allayed by the passing of the Anatomy Act of 1832, which, by affording facilities for the practical study of anatomy gave a great impetus to study in this country.

One of the curious features at the early part of this century was the continuance of the system of private medical teaching. Some of these schools attained a great deal of prosperity—Grainger School in the Boro', founded by Edward Grainger, a dresser of Sir Astley Cooper, at the United Boro' Hospitals. Grainger failed to get an appointment when Aston Key was appointed Demonstrator and started a school of his own in Webb Street, near Guy's Hospital. He built a theatre, and by securing the services of the resurrection men assembled a class of 300 students. Edward Grainger died in 1824, but the school continued under his brother, R. D. Grainger, until 1842, when it was closed; St. Thomas's Hospital securing his services as Lecturer on general anatomy and physiology. The Hunterian School of Medicine in Great Windmill Street and the Aldersgate School were other schools of great importance. The latter was closed in 1849.

It was at Grainger's School that the body of the English philosopher, Jeremy Bentham, was dissected and lectured upon, in accordance with his will, by his friend, Dr. Southwood Smith; after the examination his body was embalmed and dressed in his clothes and is still preserved at University College, London. Southwood Smith, previous to the passing of the Anatomy Act, had published an article in the *Westminster Review* on the use of the dead to the living, advocating facilities for dissection. At the ceremony Southwood Smith gave a sketch of Bentham's philosophy and an account of his last moments. During the ceremony a violent thunderstorm shook the building, but Smith proceeded with a clear, unfailing voice, with a face as white as the dead philosopher's before him. Brougham, Grote and Mill were present at the examination of their dead friend.

The growth of the medical press and the influence it had upon the medical profession commenced with the efforts of William Sharman, M. D., who was at Harwich, in 1767. He commenced in 1810 to edit a periodical, which was styled the *New Medical Physical Journal or Annals of Medicine, Natural History, and Chemistry*. It was in existence in 1815.

In 1815 Thomas Wakley was a student of the Borough Hospitals; the greater part of his medical education was acquired at the Grainger School. In 1817 he became a M.R.C.S., and commenced practice. Fortunately, perhaps, he did not altogether succeed, and his great talents were turned in the direction of journalism. He founded the *Lancet* in 1823, with the primary object of disseminating much-needed information hitherto regarded as the exclusive property of members of the London Hospitals, and also with a view of exposing the family intrigues that influenced the appointments in the London hospitals and the medical corporations.

At the present time the influence of the press is enormous. Our own *Journal*, reflecting the opinions of this Association, shares with the *Lancet* and many other medical periodicals in guiding the profession upon every question to the direct issues constantly occurring.

It is of course quite impossible to give anything more than quite a brief enumeration of the brilliant work of the physicians and surgeons of this century, but there are some incidents that deserve notice—take, for instance, the remarkable advance in practical medicine by the physicians of Guy's Hospital. Richard Bright's discoveries in the pathology of kidney disease, which results were published to the world in 1872; Hodgkin, pathologist of the hospital, who published his observations on some morbid appearance of the lymphatic glands and of the spleen; and Thomas Addison, who from 1849 to 1855 was directing attention to the relationship between anemia and disease of the suprarenal capsules. These diseases are now known all

over the world as Bright's disease, Hodgkin's disease, and Addison's disease. In 1873 another Guy's physician, Sir William Gull, described to the Clinical Society of London a cretinoid state supervening in adult life in women.

In 1837 Gerhard, a young American physician, clearly laid down the difference of the two diseases of typhus and typhoid fever. After much doubt and discussion the question was finally settled in England by Sir W. Jenner in 1849-50.

The credit of recognizing the connection between the acceleration and violent actions of the heart and the enlargement of the thyroid gland, two of the great cardinal symptoms of exophthalmic goiter, undoubtedly belongs to the great Dublin physician Graves, who in 1835 pointed out in a published lecture that the disturbances of the heart's action is not necessarily associated with organic disease of the heart. Five years later a German physician, Basedow, published a more complete and elaborate account of the clinical features.

Hughes Bennett first described leucocythemia in 1845. A few weeks afterwards Virchow published a case which had been independently observed by him previous to the publication of Bennett's first communication on the subject, and pointed out that the white corpuscle found in the blood were not pure cells, and termed the disease leukemia. A violent controversy sprang up between those two celebrated men and other supporters. Of this Byrom Bramwell says "that while Bennett was the first to observe and publish a detailed case of the pathological appearances and blood-changes, Virchow was the first to give an intelligent explanation of the peculiar alteration of the blood which is the essential characteristic of the disease."

Among other great contributions to the advance of scientific medicine, one can but enumerate the works of Marshall Hall, Elliotson, Stokes, Alison, Sir Thomas Watson, the Farrs, Sir W. Jenner, Sir J. Simpson, Tyler Smith, the Budds, and Sir James Paget. In connection with the name of Dr. Elliotson, who aroused such a famous controversy in relation to his association with mesmerism, it is interesting to note that he was the first in 1826 to discard the style of dress then prevalent with physicians—namely, knee-breeches and silk stockings. He was also one of the earliest in England to adopt the practice of auscultation.

In surgery, more perhaps than in medicine, the tendency has been to specialize. Some of them inevitable and most desirable, others quite unnecessary. Dentistry is now practised as a special branch of surgery. The earnest work of Sanders, Sir W. Lawrance, and later of Sir W. Bowman, Critchett, and many others, has established ophthalmic practices in this country. In aural surgery, George Pilcher, Toynbee, Yearsley, Harvey, Hinton, and many still living have

raised aural surgery from a neglected condition to a recognized position as a legitimate branch of surgery.

In all the domains of surgery there has been no more brilliant advance than in abdominal surgery. Operations that scarcely more than forty years ago were deemed unjustifiable—so great was the mortality at that time—are now performed with success in every hospital. For this our thanks are due to Sir Spencer Wells, Keith, Clay, Greig Smith, and many of those still living, but to none more than he to whom all surgery is indebted for antiseptic precautions in treatment.

It is not, perhaps, so generally known as it deserves to be, that William Jeaffreson, of Framlingham, in the County of Suffolk, an East Anglian surgeon, was the first surgeon in England to perform the modern operation of ovariectomy by a small central incision. The circumstance, as recorded in the Transactions of the Provincial Medical Association of 1837 are as follows: "Mr. Jeaffreson in 1833 lost a patient suffering from an abdominal tumor. She died from tuberculous disease of the lungs; and, obtaining the consent of the friends, he made a post-mortem examination, which satisfied him that the tumor could have been removed, and but for the disease of her lungs her life might have been spared."

In November of the same year Jeaffreson and his friend King attended together a lady in her confinement with a small tumor. They subsequently advised an operation, and in May, 1836, a central incision was made, about $1\frac{1}{2}$ inch, the cyst tapped, withdrawn, the pedicle secured by ligature, and the ends cut off short. The wound was adjusted by two sutures, and napkins wrung out in the coldest water were constantly applied to the wound. Sulphate of magnesia was administered every four hours, and all went well until the tenth day, when he was called to his patient at 3 A. M., to find her pulseless, with incessant vomiting and hiccup, with griping pains in her body. A stimulating enema, with 2 grs. of opium, gave her speedy relief, and she recovered.

His friend and neighbor King at Saxmundham, Suffolk, about ten miles away, operated a few weeks later, with complete success, his incision being somewhat longer—about 3 inches. Two years subsequently a third East Anglian surgeon, Crisp, of Harleston, who lived about twenty miles from Jeaffreson, was also successful, with an incision of 2 inches. These three cases, which were performed by three surgeons in general practice in this country, were the first in England, in response to the doctrines of William and John Hunter, and are the more remarkable when we consider that no operation of the kind was attempted in London until four years later, and no ovariectomy was performed in a London hospital until ten years after Jeaffreson's case.

Of another special branch of practice, the

treatment of mental affections has greatly improved, and the provision of suitable institutions has generally extended. Among many others to whom we are indebted are William Tuke, 1732-1822, and other members of the same family; Sir E. Bucknill, and many other physicians at home and abroad. A provincial physician, Dr. Robert Gardner Hill, who was Mayor of Lincoln in 1851, deserves to be specially remembered. In 1839 he published lectures on the management of asylums and the treatment of the insane. He argued that in a properly-constituted building, with a sufficient number of suitable attendants, restraint is never necessary, never justifiable, and always injurious to all cases of lunacy whatever.

Of the further practical results in surgery the results are so well known that it goes without saying that the advance has been enormous, thanks to our countrymen Sir R. Brodie, Aston Key, Sir W. Lawrance, Robert Liston, Sir James Paget, Syme, and the Edinburgh surgeons Sir W. Ferguson, John Hilton, the Dublin surgeons, Sir George Humphry and many still living, as well as by the brilliant achievements of surgery in all parts of the world.

The two great discoveries of the nineteenth century in connection with both medicine and surgery are the antiseptic treatment (for which we are indebted to the genius of a living surgeon, Lord Lister), and the use of anesthetics. Those now in general use are nitrous oxide gas, discovered by Sir Humphry Davy in 1800; of sulphuric ether, by Faraday; and chloroform, by Liebig. I shall not detain you by a history of the introduction of anesthetics into surgical practice, but as we have still living in East Anglia a most distinguished surgeon (Mr. William Cadge), who was present on the occasion of the first operation in London under the influence of ether, I thought it would be interesting to hear his record of the circumstances. Mr. Cadge says: "Robert Liston was the first surgeon in this country to use ether, and those who were present at University College Hospital on December 21, 1846, and witnessed the complete and perfect success of that first venture, will not easily forget the dramatic character of that scene. I was present and assisted at the operation—amputation of the thigh by the double flap method. Someone present timed the operation; it took 30 seconds; the few arteries were tied, and all signs of blood cleared away. A towel was then thrown over the stump, and we watched anxiously for the patient to show that he was not dead; he presently woke up, and when asked once or twice if he could stand the pain of the operation, he accused us of cruelly trifling with his feelings, and when the towel was removed and he saw the naked stump, he burst into tears, and I thought Liston would do the same."

Many fresh fields of inquiry and separate study have been instituted. In 1831 Alfred Swaine Taylor, the famous chemist and medical

jurist, was appointed Lecturer on Medical Jurisprudence at Guy's Hospital. His inaugural course was the first delivered in this country, and was attended by many leading counsel and some judges.

In 1842 Parkes was Assistant Surgeon to the 84th Regiment, when he retired and became physician to University College Hospital. He was the founder and first teacher of military hygiene, and was a great factor in, if not the founder of, the science of modern hygiene.

The elaborate directions in the Mosaic laws for the preservation of health, through scrupulous attention to cleanliness and the isolation of the sick and extreme care in the use of wholesome articles of food and drink, are well known to Biblical students.

The subject has in later years been studied to considerable advantage. In 1801 Heberden wrote: "The cause of so great an alteration in the health of the people of England—for it is not confined to the metropolis—I have no hesitation in attributing to the improvements which have gradually taken place, not only in London but in all the great towns, and in the manner of living throughout the kingdom, particularly in respect to cleanliness and ventilation. Two centuries ago the mortality of London is stated to have been 80 per 1,000; at the present day it is under 20. A century ago ships could barely keep the sea for scurvy, whilst gaols and hospitals were in many cases the hotbeds of fatal disease. Now these conditions are rectified, or at least the means of rectifying them are known."

The special departments which concern the surroundings of man—his personal health, food, drink, clothing, hours of labor, and certain other points, such as the management of infancy, the prevention of disease, the hygiene of the sick chamber, and the disposal of the dead—have been the subjects of legislation during the present century.

State medicine, as an organized department of administration, is entirely of modern growth.

In passing the milestone of life in the year A. D. 1900 I have thought it might be well to take a retrospect of our advance to our present position, and to express the hope that as time goes on our profession may continue to uphold its regard in the estimation and affection of all, and its usefulness may continue unchecked for the advantage of humanity.

THE SURGEON IN THE NINETEENTH CENTURY.¹

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I AM fortunate in the circumstance that the occasion for the giving of this address coincides with the concluding year of the nineteenth cen-

¹ The Address in Surgery delivered at the annual meeting of the British Medical Association, Ipswich, July 31, August 1, 2, 3, 1900; advance abstract through the courtesy of the Editor of the *British Medical Journal*.

ture. This century has been without a parallel in the history of human culture, and so far as the art of surgery is concerned has embodied an advance in principle and in practice which has been no other than revolutionary. I do not propose to attempt a review of the progress of surgery during the last hundred years. That work has been already done by abler hands. I would venture rather to deal with the progress of the surgeon himself during this period, and with the advancement of the individual as an exponent of a grave profession.

There is little difficulty in fashioning a picture of England as it was one hundred years ago. Education among the mass of the people was a matter of little account, and was to a great extent actually non-existing. The average man of the middle class was quite content with a degree of learning which would do little more than satisfy the demands of a modern school board.

As to the surgeon in those days, he was but a sorry element in social life. In the great towns and cities there were esteemed practitioners of surgery who were eminent by reason of their scientific work and their successful practice, but their numbers were few. At the commencement of the period under notice London was the center of surgical activity, and the prominent exponents of the art at that time were John Abernethy, Henry Cline, Sir William Blizard, Sir Everard Home, Sir Astley Cooper, William Lawrence, and Charles Aston Key. The great John Hunter had died in 1793, having accomplished a work which marks an epoch in British surgery. In the provinces the most conspicuous surgeons were Edward Alanson of Liverpool and William Hey of Leeds, while in Edinburgh the position of the leading operator was held for many years by John Bell. A little later in the century we find among the names of prominent men in England those of Sir Charles Bell, Sir Benjamin Brodie, and the ingenious and learned Benjamin Travers.

At the beginning of the century surgery on the Continent was represented by such men as Sabatier, Deschamps, Boyer, and Larrey in France, Scarpa in Italy, Langenbeck, Chelius, and Diefenbach in Germany, and Warren and Physick in America.

The surgeon or common practitioner in the village and town in those early days has been depicted by many writers. There was probably some excuse for a writer who, in a discourse in the *New Monthly Magazine* for 1828, speaks of the general body of surgeons as a "cringing pulse-feeling race."

In noting the advances made by the surgeon during the century, the first matter which may be dealt with concerns his position as an adviser to his patient. There is no science outside our own in which there has been, during the stages of development, such an extreme disproportion between the amount of knowledge professed and

the amount proved ultimately to be exact and sound. As an example of this may be cited the "humoral" system of pathology which, in spite of its ancient origin and its more or less obvious foolishness, held a position in medicine for centuries, and struggled on, as a distorted and dying creed, even into modern times. This system, in its barest features, asserted that four cardinal humors occupied the human body, and that practically all diseases, and certainly all tumors, were due to disorders of certain of these fluids. The pathology of this system was precise, dogmatic, elaborately classified, and full of detail. Upon it all treatment was founded, and yet the whole of this precious system was a mere daring fiction, an ingenious fancy, the product of an impudent and unscrupulous imagery. The reason for all this lies more with the sick man than with the man of medicine. The sick man requires absolute and exact knowledge from his doctor. He will accept neither possibilities nor doubts nor confessions of ignorance. He will accept such from his lawyer and from his man of business, but not from the man who attends him in illness.

The surgeon of the present day, as an adviser, is in a position which is so greatly improved that it could hardly have been imagined by his forebears of one hundred years ago. He has in the first place to deal with a more enlightened public, with patients whose education to a large extent enables them to appreciate the nature of scientific problems, and with whom it is possible to discuss difficulties, and to own to lapses of information. In the second place, the additions made to surgical lore have been so substantial that in many departments surgery has reached the status of an exact science. There is indeed no longer need to call upon invention to supply such gaps as still indicate the unknown. An intelligent patient is satisfied with the assurance that practically nothing at present is known of the nature and causes of cancer. Such assurance is at least as valuable as the information provided at the beginning of the century, when the inquirer would have been told that cancer was "a diseased hardness," or a "scirrhus degeneration." The modern surgeon can well afford to dispense with all empty verbiage, since he can base his opinion upon demonstrated facts and can express it in plain words, free from any of the embellishments of a literary masquerade. For many reasons this is well.

In 1800 a man could practise as a doctor without passing an examination of any kind. Indeed, one itinerant practitioner is reported to have assumed the title of assistant surgeon on the ground that he had served an apprenticeship to the crutch-maker of a hospital. The examination for the diploma of the Royal College of Surgeons was by *viva voce* only. There was no examination of patients, and no dissection of the subject. Candidates were required to produce evidences of apprenticeship, of attendance upon

anatomical and chirurgical lectures, of having performed dissections, and of having attended the practice of a recognized hospital for a period of six months.

At the commencement of the century there was, indeed, no systematized medical education. The training of the surgeon was paltry, casual, and inefficient. His preliminary education was miserably meager. It was necessary that he should be able to read and write and pretend to some smattering of Latin. He became an apprentice, and, in that menial capacity, gleaned what he might from his master and from attendance upon sundry lectures. So far as hospital practice was concerned, his attitude as a learner was well expressed by the phrase, "He walked the hospital." The institutions which he thus attended for a period of six months were in a state of rude squalor as regards administration, sanitary arrangements, and nursing, and well deserved the abuse which was lavished upon them.

During the nineteenth century the surgeon, as an operator, passed through a rapid metamorphosis, and has now reached at least the level of the unexpected. It may have been supposed that there is little to be learnt in the way of using a knife which had not been learnt during a period of over eighteen hundred years, for there were surgeons before the Christian era. Yet time has shown that even in 1800 there was a technic in operating which was as little like the technic of to-day as are the slashes of a cutlass when compared with the studied movements of a foil. It may have been surmised that twenty centuries would have exhausted the methods by which a limb could be cut off. Yet in 1800 modes of amputation were in vogue which are now regarded as uncouth. It cannot even be said that the commencement of the century saw in use a ready and efficient means of checking bleeding, although that measure represents the most elementary of the surgeon's duties.

The operator of olden times certainly possessed many qualities which are now falling into abeyance, and which cannot pass away quite unregretted. The success of his craft depended largely upon his daring, upon the alertness of his eye, the steadiness of his nerve, and the rapidity of his movements. He stepped into the arena of the operating theater as a matador strides into the ring. Around him was a gaping audience and before him a conscious victim, quivering, terror-stricken, and palsied with expectation. His knife was thrust through living flesh and acutely-feeling tissues, and the sole kindness of his mission was to be quick. In spite of moans for mercy from gagged lips the knife had to move on its way steadily, and, undeterred by struggles and bursts of hemorrhage, the blade must needs pass without faltering or sign of hesitancy.

There is less need for such qualities now. The dramatic element in surgery has gone with the

men who unconsciously fostered it. The operating theater of the present day has lost its horrors, and has changed from a shambles to a chamber of sleep. The surgeon's hand can move with leisurely precision, and theatrical passes of the knife are favored only by those who have not yet learnt that mere brilliancy is no measure of success.

It may be that the present-day surgeon is a loser in that he has less need for those dashing qualities which were essential to the operator before the days of anesthetics; but, on the other hand, he has gained much in the direction of the sympathetic handling of his patient and in the culture of gentleness. Consideration for the patient and for the patient's sensibilities have become a matter of the first moment, and the operator has learnt that his work is best done if done with gentleness and tact, and that haste and bluster, coarseness and coarse handling are out of place around the operating table. A striving after effect at any cost has ceased to be an element in the surgeon's work. Success is no longer to be measured by the number of minutes occupied in the amputation of a limb, but by the state of the patient many days after the measure has been completed. The triumph of the older surgeon was immediate and scarcely reached beyond the arena of the theater. The triumph of the modern surgeon is deferred, and is found in the operation ward and in the convalescent home.

Still, the fact remains that it is easier to be a surgeon of some degree at the end of a century than it was at the commencement, since in the earlier days the qualities needed for success in operating were rare and of a kind not readily to be acquired. On passing more into detail, one notices that beyond these general changes in the attitude of the operator there have been others which owe their existence to special advances in the surgeon's art. Prominent among these may be named: (1) An improved knowledge of anatomy; (2) a readier method of arresting hemorrhage; (3) the employment of anesthetics; and (4) the introduction of antiseptic measures.

At the present day the surgeon has little dread of hemorrhage, and the confidence he possesses is based upon good grounds. In the first place, he makes larger use of the precautionary ligation of vessels. It has become a commoner practice to apply a temporary or permanent ligature to a main artery before a part supplied by that vessel is excised. This is carried out frequently in dealing with large and vascular tumors. In removal of the tongue, moreover, an excellent method is that in which a preliminary ligation of both linguals in the neck is carried out. In removing the uterus through an abdominal incision the question of hemorrhage is disposed of by an early ligation of the ovarian and uterine vessels. A further example of this mode of anticipating bleeding is afforded by that

method of hip amputation which is known as the anterior racket. Here the main vessels and even the main branches are secured before the flaps are cut, whereas by the older plan the vessels were severed with the flaps and were tied after the limb had been removed.

In the second place, the latter-day surgeon is operating upon an anesthetized patient and can proceed with slowness and deliberation. The importance of this fact in connection with the present subject cannot be overstated. In the instances which have been just cited an excision of the tongue in a conscious patient would be greatly extended by the twofold operation in the neck, and whereas the amputation of the hip by transfexion occupied in able hands but a minute or so, the operation by the anterior racket is tedious and involves relatively much expenditure of time.

Thirdly, the treatment of hemorrhage has been to a remarkable extent simplified, if not indeed rendered complete, by the introduction of the pressure forceps of Sir Spencer Wells. These little instruments represent the most valuable addition which has ever been made to the surgeon's appliances. It is not uncommon in operations of a certain type to have twenty or more pairs of pressure forceps applied to the surface of the wound at one time. This represents a degree of possible bleeding which in the old days, when every vessel had to be separately tied, would have been replaced by actual bleeding of a fatal type. No instrument has brought with it so great an assurance of security or has done more to extend the area of safe operation.

The value of the anesthetic and the radical and beneficent transformation it has effected in surgical practice call for no comment in this place. The changes that the discovery has wrought in the personality of the surgeon, in his bearing, in his methods, and in his capabilities are as wondrous as the discovery itself. The operator is undisturbed by the harass of alarms and the misery of giving pain. He can afford to be leisurely without fear of being regarded as timorous. To the older surgeon every tick of the clock upon the wall was a mandate for haste, every groan of the patient a call for hurried action, and he alone did best who had the quickest fingers and the hardest heart. Time now counts for little, and success is no longer to be measured by the beatings of a watch. The mask of the anesthetist has blotted out the anguished face of the patient, and the horror of a vivisection on a fellow-man has passed away. Thus it happens that the surgeon has gained dignity, calmness, confidence, and, not least of all, the gentle hand.

Anesthetics have, moreover, greatly extended the domain of surgery by rendering possible operations which before could have been only dreamt about, and by allowing elaborate measures to be carried out step by step.

The introduction of anesthetics has not only

developed surgery, but it has engendered surgeons. It has opened up the craft to the many, for in the pre-anesthetic days the qualities required for success in operating were qualities to be expected only in the few.

Of the great work of Lister, and of the introducing of the antiseptic treatment, there is no call to speak at this time. When the century was young the touch of the operator was the touch of a tainted hand; the balm he poured into the wound was poisoned, and he himself undid the good his science strained to effect. It is sad to think that behind the earnest man with the ready knife there stood a shadow which rendered hopeless his kindest effort, and which only too often proved to be the veritable shadow of death.

The change has been great, and its greatness lies in its littleness, for it is bound up with no more than this: The surgeon has learnt to be clean. The operator of days gone by would have turned with some petulance from the grand simplicity of the counsel to be clean. He ever sought some means of mighty bearing to rid him of the incubus of failure, and, like Naaman of old, he would have hesitated to dip in the Jordan of antisepticism to be free of his leprosy. The surgeon has not only learnt to be clean, but he has become aware of the potency of little things. The demands of the antiseptic treatment have made him minutely careful, distrustful of any aid that he cannot control, and suspicious of any semblance of error.

It is possible that the abandonment of the old easy order of things has been followed by a too slavish devotion to mere ceremonial. The remarkable and extravagant preparations with which some surgeons now approach an operation, the cleansings and the washings which precede the laying on of hands, smack a little of fetish worship, and foster the cult of the surgical Pharisee. On the other hand these performances, this "making clean of the outside of the cup and platter," seem to give assurance, and to render the devotee thankful that he is not as other men.

Circumstances in the tendencies of to-day foreshadow to some extent what may lie buried in the future. The changes which have swept over the world of surgery have extended the possibilities of the art, and have, at the same time, added a host to the ranks of those who practise it. Where there was one surgeon there are now ten, and throughout the breadth of the land and to its utmost limits the work of the operator has extended. The more ambitious performances of surgery are no longer restricted to great centers, but are carried out in the little town in the cottage hospital, and even in the cottage itself. The general practitioner is laying claim to operate upon his own patients, and is carrying out his intention in no hesitating manner. The days of the great operator, of the one

man to whom all came who could, are rapidly passing away. Indeed, the practice of pure surgery, which was at one time limited to the prominent few, is now becoming common to the many. The man who excels conspicuously as an operator will always attain such eminence as his ability deserves, but the exclusiveness of the practice of operative surgery is quietly vanishing with the century. This change is well. It is a change that is inevitable. The democratic movement is the active power of the day, and that an oligarchy in the community of surgeons should be replaced by an earnest democracy is precisely in accord with the spirit of the times.

In every great change there must—at first at least—be some undesirable developments, and it is impossible to deny that the wider distribution of the practice of operative surgery may lead to the occasional performance of major operations by men who are not justified, either by experience or by training, in undertaking them. Furthermore, there is, among the signs of the times, some evidence that the reaction in the matter of operative surgery is to some degree extreme, and that we are in danger of passing from the policy of doing too little to the policy of doing too much. Operations we know were too few in the past, but there is some foundation for the impression that they are occasionally too frequent in the present.

One other matter which looms out of the future will suffice to bring this subject to a close. So many have been the artificial aids to clinical investigation which recent science has introduced that it comes to be a question whether the natural acumen of the surgeon will not deteriorate in proportion as he fails to encourage that particular learning which clings to the finger tips of all great diagnosticians. That there will be such a decadence is beyond doubt. The loss is to be deplored, for if there be one point of excellence which stands before all in the qualifications of the perfect surgeon, it is bound up in that refined sensibility, that critical perception, that inestimable cunning, which lie in the surgeon's touch. Examples of the directions in which this loss will be felt come readily to mind. A considerable amount of skill, for example, is demanded in the examination of complex fractures, of lesions of deep-seated bones, and of injuries about joints. What was to be learnt of these troubles had to be acquired by a tedious manipulation demanding considerable refinement. The surgeon who has now to deal with such conditions can afford to dispense with a prolix examination, and can submit the inquiry to a demonstrator of the Roentgen rays. The skiagraph, although its value is much exaggerated, embodies a substantial gain, but it is to be discounted by the loss of the great element in education which it is slowly replacing.

An obscure tumor—to take another instance—presents itself, and no longer is the surgeon com-

pelled to trust to the acuteness of his inquiry and his patient review of all the physical details of the mass. For what his ready fingers may have learnt can be substituted the findings of the exploratory incision, the trochar, and the aspirator. Here once more an advantage is minimized by a loss.

Or, again, an abdominal swelling is brought under notice. Its features are obscure, but much of the uncertainty of outline can be dissipated by a cultured hand which, with infinite patience and repetition, has learnt to construct a reality out of a shadow. It may be said that it is needless to persist in bringing this much elaborated means of inquiry to further perfection since the problem is at once to be solved by an exploratory laparotomy. By such little operation a great advantage is gained, but an opportunity to add to one of the most refined forms of learning is lost. The value of the exploratory incision is beyond question, but among the signs of the times it is impossible not to notice a tendency to resort too readily to this means of solution. The Gordian knot, according to the legend, was ultimately cut, and it is a question whether the sum of human ingenuity would not have been substantially increased if attempts to untie the noose had been more diligently persisted in.

In another example, let it be supposed that a suspicious ulcer presents itself for diagnosis. In such case it is well to devote time to a precise and tedious inspection of its edges and to a careful tactile examination of its base, and to check what is discovered by results laboriously gained from like inquiries? Is it not simpler to take a scraping of the affected surface and to submit it to a microscopist, and to thus be spared a method of examination which, although it may not give final results, yet represents an opportunity of furthering a priceless accomplishment?

Finally, there are cases which present symptoms hard to interpret at any superficial inquiry. Is it worth while in such to undertake an exhaustive critical research and to submit the whole to a trained judgment? The quest would no doubt develop habits of observation and powers of weighing evidence; but the process is slow, and an inquiry carried out in a bacteriological laboratory will clear up all doubts, and at the same time dispense with the efforts of a cultured sense. Those, therefore, who are concerned with the education of the surgeon of the future would do well to still cherish this ancient power, and to foster a memory of the fact that surgery is, in its very essence, a handicraft, and that in all that he does the surgeon's great endeavor should be to make his own hands self-sufficing.

It is sad to think that this hardly-acquired faculty dies with the possessor of it, and never was this more vividly presented than it has been by the loss surgery has sustained in the death of Sir James Paget. One can picture the great surgeon composed in his last sleep, and can see the once

busy fingers lying lifeless on the white sheet, and then comes the wonder at the wealth of learning, at the exquisite cunning, at the refined sense which lay dead in the dead hand. No written book can hold a tithe of the dainty knowledge which had been mastered by those subtle fingers, and no record, however labored or however loving, can tell of the power which once rested in that magic touch.

An individual loss does not, however, hinder the general tide of progress. Advance in such a work as ours depends upon the uneventful work of the whole body and is only accentuated by the achievements of the prominent few. The movement is the movement of a multitude in which individuality is, at a distance of time, little to be distinguished and in which personal eminence contributes a smaller factor than the present is ready to acknowledge. Those who stand forth as the leaders of the advance are merely the elect of the common body and the representatives of a wide intellectual franchise. Even he who startles the world as a discoverer has often done little more than give expression to what was already nascent in the multitude. So as one great surgeon after another drops out of the ranks his place is rapidly and imperceptibly filled, and the advancing line moves on with still the same solid and unbroken front. The continuity of progress is undisturbed by the uncertainties of human life.

MEDICAL PROGRESS.

Hydrocephalus.—Bourneville and J. Noir (*Le Progrès médical*, July 14, 1900) report the following interesting case. There is no hereditary history; while the mother was pregnant she had smallpox, and this, together with worry over the death of one of her children, resulted in the birth of this child at seven months. It weighed only two pounds, and during its first six months of life the head was normal. Then it was seized with convulsions and its head became much enlarged; the convulsions ceased after eighteen months, but the head continued to increase in size. At eight years of age epilepsy set in, as many as seven seizures a day, resulting in contractures and complete idiocy. About this time the breasts became large, pubic hair appeared, and menstruation became regular. The child masturbated excessively, became rapidly emaciated, and died. The autopsy showed obliteration of the aqueduct of Sylvius and miliary tuberculosis of both lungs.

Peritonitis.—The peritoneum is a joint of vast dimensions, says Byron Robinson (*Med. Rec.*, July 28, 1900), consisting of four elements, *vis.*, endothelial cells, interendothelial spaces, stomata vera lined by granular polyhedral cells, and stomata spuria, irregular openings between the endothelial cells. Its functions are to prevent friction between moving viscera;

to anchor and support the viscera, to limit them so that they may not become entangled, to furnish them with an elastic covering, to absorb and secrete fluid, and to protect from infection by throwing out barriers of exudate. Its cavity opens directly into the lymphatics and its absorptive powers become greatest in the region of the diaphragm. Therefore infection in this region is most likely to become systemic, while in the region of the gall-bladder, the appendix, or the pelvic organs, there is great chance for local peritonitis, without sufficient absorption to produce a general toxemia. Peritonitis saves life by building barriers against infection, while absorption causes death by sepsis. In the diagnosis temperature is of little value, while the pulse is always rapid, and there are tympanites, muscular rigidity, tenderness on pressure, and the facies peritonei. Patients with septic peritonitis bear anesthetics badly, and during operation should receive hot rectal injections or hypodermics of strychnine and whiskey. The rapid fluid-absorption argues against irrigation in laparotomy, as thus the germs become widely and rapidly distributed. The best drain is a rubber tube enclosed in strips of gauze. After the operation, give calomel, one grain, and magnesium sulphate, half a teaspoonful, hourly for five or six hours. This revives intestinal peristalsis, starts the secretions, and affords drainage from the mucosa. The exquisite tenderness found in the locations of tumors or in the pelvis generally indicates local peritonitis, and this may form adhesions which can cause dull aching sensations for years. Excluding perforation, peritonitis occurs from trauma, and at the bowel flexures, the sphincters of the intestine, and the fimbriated ends of the oviducts. The latter opening directly into the peritoneum account for so much pelvic peritonitis in women. The symptoms of pelvic lymphangitis are pain, rapid, small, wiry pulse, nausea, vomiting, tympanites and a temperature of 101° to 105° F. In the chronic form there are tenderness, palpable exudates, pain, disturbances in the vesical, rectal, and menstrual functions, irregular tympanites, indigestion, anemia, and, finally, neurosis. The usual situation of the mass of exudate is in Douglas' pouch. The treatment is by douche, tampon, massage, extra-uterine electricity, general measures, and rest in bed during menstruation. In the acute cases rest in bed, hot cornmeal poultices, opiates, liquid diet, with calomel and magnesium sulphate for the bowels. As the condition subsides douche twice a day and use the boroglyceride tampon twice weekly.

Amenorrhea.—Among the causes of amenorrhea, writes L. H. Dunning (*Med. Rec.*, July 28, 1900), the most frequent are the constitutional diseases: Bright's, tuberculosis, chlorosis, anemia from unhygienic surroundings, and acute infectious diseases, such as pneumonia and scarlet fever. The local causes are imperforate

hymen, atresia of vagina or cervix, imperfect development of uterus or ovaries, inflammations, ovarian cysts, and fibroids. A temporary amenorrhea may occur in school-girls who overwork or neglect proper exercise, and in women undergoing prolonged mental strain. Amenorrhea following serious and debilitating disease need cause no alarm. The treatment in anemic girls consists of out-of-door sport, good blood-making food, iron, arsenic and sometimes the intra-uterine faradic current, or mild emmenagogues, such as one- or two-grain doses of potassium permanganate. In constipation aloes is the best cathartic, and may be aided by tepid baths, friction and free water drinking. Where exercise causes too much cardiac or respiratory disturbance, massage, Swedish movements, and surface electricity may be used. For imperforate hymen incise, empty vagina, and pack lightly with gauze; for stenosed cervix dilate and introduce a Wylie drainage-tube pessary. If amenorrhea is due to retarded development, treat the general system, give tonics, iron and aloes pills, and introduce the zinc and copper stem-pessary of Simpson into the dilated uterine canal. Sometimes in a woman otherwise healthy, a happy marriage results in the speedy growth of the sexual system, and even pregnancy.

The Pituitary Gland in Therapy.—The greater part of the overgrowth in giants, writes Woods Hutchinson (*N. Y. Med. Jour.*, July 21 and 28, 1900), is found at or near the tips of the segment-crescents, as in acromegaly, differing from the latter mainly in that it is not exclusively confined to the tip of the segment or last division of the limb. The facial part of the skull is enlarged out of all proportion to the cranial, particularly in the region of the lower jaw. Giants tend to live but a short time, rarely much over twenty years. Their mental and physical vigor and their sexual powers are below normal, males predominate, and death usually results from a steady, progressive increase of weakness, from some trifling accident, or from usually mild intercurrent disease. These are just the conditions found in acromegaly, and in both this and giantism there is enlargement of the pituitary gland in a large proportion of cases. Summing up his work on the pituitary gland, the author concludes that it is a functional organ, disturbances of the metabolism of which are the principal factors in both acromegaly and giantism, the difference between the results being due to the stage of individual development at which the disturbance of function begins. The nature of the overgrowth is primarily a functional hypertrophy, but later loses some of the definiteness of its impulse, and either produces immature tissue of a mixed type, or results in simple hemorrhagic exudation, with cyst-formation or complete breaking down of the tissue mass. It seems probable that some part is played by this body in dwarfism, rickets, and the dwarf forms

of cretinism, and that a reflex disturbance of its function may possibly underlie the dystrophy accompanying pharyngeal adenoids. The pituitary gland would seem to be a sort of growth center, or proportion-regulator of the entire appendicular skeleton. Both pituitary and thyroid extracts have been used; in two cases the former aggravated the symptoms and in several the thyroid extract seemed to remove the mental dulness, loss of appetite, and abnormal conditions of the skin, *i. e.*, the myxedemic symptoms.

Results of Gelatin Injections.—Max Freudweiler (*Centralbl. f. innere Medicin*, July 7, 1900) cites two cases of hemorrhagic nephritis, one chronic, the other acute, in which gelatin solution was injected into the upper part of the thigh. The first case had lost much blood from epistaxis and profuse menstruation, had 87 per cent. hemoglobin, with pulmonic and aortic systolic murmurs, and sharp second pulmonic sound. Two hundred ccm. of solution (gelatin 1.0, glycerin 2.0, aq. dest. 100) were injected three times at two-day intervals. A few hours after each there was infiltration and severe pain about the site of the injection, which, however, disappeared in about twelve hours. No diminution of the bleeding resulted, and the filtered urine had a brownish-red color, due to methemoglobin. The albumin in the urine was doubled and the serum of the blood was of a light-red color. The second case exhibited postpartum nephritis with 51 per cent. hemoglobin. Only one injection was made and this consisted of six grams of gelatin dissolved in 300 cc. normal salt solution. The urine became scant, the albumin increased, and the hemoglobin of the blood went down to 45 per cent. The author thinks that the products of the gelatin probably irritated the kidneys.

Abortus Artificialis.—It is conceded on all sides that artificial abortion under certain limited conditions is a necessity demanded by science. Oehlschläger (*Centralbl. f. Gynecologie*, July 7, 1900) gives the indications and most improved method for its performance. The indications are: (1) Endocarditis with edematous swellings; (2) well-advanced tuberculosis; (3) nephritis; (4) uterine disease; (5) deformed pelvis which would necessitate Cæsarean section; (6) uncontrollable vomiting. After the necessity for artificial abortion has been established, the operation should be resorted to at the earliest possible moment as a measure of greater safety. A rule of conduct always to be insisted upon is for the attending physician to call in consultation some colleague as to the necessity for the operation. As for the technic of abortus artificialis, Oehlschläger gives the method in use by him and declares that he has never failed in it nor has ever witnessed untoward results succeeding it. A metallic curved catheter with a lumen of about 2 mm. is introduced into the uterus as far as the fundus. This is absolutely imperative for it

brings the instrument in the immediate neighborhood of the embryo. About a dram of tincture of iodine is injected through the catheter which instrument is then removed. The vagina is tamponed to prevent the iodine which may partly trickle down from irritating the vaginal mucosa. About three days thereafter a little flood is passed and the abortion results in the nature of an ordinary menstruation. This may not occur if the catheter has not reached the fundus. In that case the operation is again performed. The entire procedure is so little exciting to the patient that she may go about immediately and need not necessarily go to bed. This is the case when the menses have ceased only for some days or at most a few weeks. The advantages of the iodine are that it percolates through the tissues rapidly, killing the fetus, at the same time preventing sepsis by its strongly antiseptic nature. Besides, the tincture of iodine stimulates the uterus to contract, causing the expulsion of the tumor.

Aspirin in Rheumatism.—P. Zimmermann (*Berliner klin. Woch.*, July 2, 1900) gives his experience with aspirin in 30 successive cases of rheumatic nature. Included in these cases were several of neuralgia, one of exudative pleuritis, and several of nephritis. The dose varied from 40 grains to 60 grains daily, given in powder *per os*. All other remedies were withheld during this probation. The drug was easily borne by the patient and no disagreeable collateral effects were produced. After its administration, the drug usually produced profuse perspiration with simultaneous decrease of pain and temperature. Although the perspiration was much more intense than that produced by sodium salicylate it seemed to be less lasting, disappearing frequently after the third or fourth day. Of 7 patients suffering from acute inflammatory rheumatism with high temperature, swollen joints and intense pain, 6 were entirely free from pain and fever after the fifth day and became well without complication or remission. The seventh developed a pericarditis. In several cases complicated with valvular endocarditis and compensatory disturbances, very good results were obtained with aspirin. In one of these cases the drug at first seemed to influence unfavorably the breathing and heart-action, causing dyspnea; but after withdrawing the aspirin for some time the same attacks took place, showing the innocence of that drug in their production. In other patients, who had previously taken the salicylates with poor effect or else with whom the salicylates had disagreed, suffering with disturbed compensation, edema, irregular heart, valvular lesions besides the inflamed joints, aspirin was administered with good effect without any suspicion of deleterious action upon the heart. It is natural to expect that the old chronic cases would hardly succumb to the new drug and yet

in occasional cases it was successful in mitigating the pain and in easing the patient. In the cases of pleurisy with effusion in which aspirin was tried it worked favorably and promptly to diminish the fluid in the chest. In the cases of migraine and neuralgia a slight improvement only could be recorded. Aspirin has come to supplant the older salicylates by its many advantages over them.

Treatment of Neurasthenia.—O. Dornblüth (*Therap. Monatshft.*, July 1900) discounts the too free use of drugs in nervous exhaustion, but believes that certain remedies are not without their good effect. Foremost among these ranks codeine which in small doses seems to have a specific effect upon the brain not to be explained by its narcotic properties. Organic iron preparations, arsenic and the bromides are often indicated and used with success. In all cases the physician must search for and remove, if possible, the cause of the disease and insist upon a hygienic mode of life. Hydrotherapy, electricity and massage will often be resorted to with benefit. Often the insomnia is the most prominent symptom and the one for which the patient most urgently desires relief. In such cases the patient, after a light meal, should make it a point to devote the entire evening to complete bodily and mental relaxation, resorting to such occupations as arouse his interest without taxing his strength. A small amount of food before retiring, which should be one hour before the accustomed time, is often desirable, while a warm bath in the morning before breakfast is to be recommended. Among the many methods recommended as sleep-inducing, the author likes especially the warm foot-bath (104° F. for five minutes), the entire bath at 68°-77° F. followed by gentle rubbing, the Priessnitz pack at 59° F., the application of cold to the forehead and galvanization of the head. A Seidlitz powder, infusion of valerian, lactophenin or kryophin often acts promptly, and the latter antipyretics may be preceded for several nights by the administration of sulfonal, trional or dormiol when insomnia seems intractable.

Treatment of Chronic Otitis Media.—W. Grosskopff (*Therap. Monatshft.*, July, 1900) lays down the following principles in the treatment of chronic suppuration of the middle ear: (1) The use of boric acid according to Bezold's method is often, especially in children, followed by a cure. The method is simple and without disadvantages, but it is often desirable to change remedies. (2) Alcohol is to be recommended in case of excessive granulations. (3) Dry perforations demand trichloroacetic acid which may, however, induce severe pain and even suppuration. (4) Pathological changes in the nasal fossæ must not be overlooked. (5) Bromide of ethyl is especially adapted as a safe and quick anesthetic in ear cases.

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SATURDAY, AUGUST 4, 1900.

SPORADIC AND EPIDEMIC DYSENTERY.

RECENT war experiences throughout the entire world have shown that the mobilization of large numbers of troops in warm weather almost inevitably gives rise to epidemic dysentery. In the past it was easy to dismiss any question of obscurity in the etiology of these outbreaks on the theory that insanitary conditions "bred disease." Now we know that disease does not originate *de novo* at each fresh epidemic, but has somehow been preserved, perhaps in some insidious modified form, from preceding epidemics. To discover the methods of this preservation of disease from epidemic to epidemic is one of the most interesting problems in modern medicine. Its solution for any particular affection means, as regards prophylaxis, an immense gain in our armamentarium against disease.

The question of the conservation of dysentery by the occurrence of sporadic cases does not seem very difficult. Series of cases of the disease occur in many different parts of the country every year. It probably would not be difficult to trace the chain of connection between these various groups of cases. In some of the jails, asylums and workhouses of the country there occurs an epidemic of acute dysentery of

an especially virulent type. Such good authorities as Flexner and Osler seem to incline to the belief that these cases of acute dysentery are due to the same microbic cause as the acute dysenteric affections that have been studied so carefully of late among our troops in the Philippines and the West Indies. If this be true, then the explanation of the serious outbreaks of dysentery in military and other camps is not far to seek. Acute dysentery, even that known as tropical dysentery, is therefore endemic among us, although it occurs in mild form except under especially favorable conditions.

Dr. Flexner has shown that the acute dysentery at Manila is probably due to a specific bacillus isolated by him. Musser has shown that this same bacillus is the cause of dysentery in Porto Rico; at least the blood of a patient suffering from Porto-Rican dysentery will agglutinate the bacilli in a drop of pure culture of Flexner's bacillus, and this is generally considered to be a crucial and conclusive diagnostic test. If by the same method it could be demonstrated that most of the cases of acute dysentery that occur throughout the country were due to this bacillus, a distinct advance in pathogenesis would be chronicled. The agglutinative method of investigating disease has become so familiar of late years because of the universal adoption of the Widal test for typhoid fever that this investigation would not be difficult. Boards of health throughout the country are in a most favorable position for the taking up of the serum diagnosis of dysentery. Let us hope that the opportunity thus afforded to add to the good work already being done by boards of health will not be neglected, and that even this present summer will see the collection of a set of definite statistics in the matter. If this point can be established it will place the nosology of endemic dysentery on a reasonably rational plane.

THE CAUSE OF GENERAL PARESIS.

EVIDENCE is slowly but surely accumulating each year proving that general paralysis of the insane is essentially a syphilitic disease. This is the commonly-accepted belief among alienists, although as yet without absolute demonstration. A few conservative investigators still hold that the case for etiology of general paresis is summed up in "syphilis and alcohol plus an unknown excitant," while the vast majority of alienists hold to the old Scandinavian idea, "No syphilis no paresis."

Mott of London, in a recent careful survey of juvenile general paresis, found practically all of the hundred or more cases to be dependent upon a syphilitic parentage. Hansen and Heiberg, in a very recent study of syphilis and general paresis in the psychiatric clinic of Kraepelin (*Revue Neurologique*, June 15, 1900), collected and compiled all statistics at hand in regard to the age at which syphilis and general paralysis are required. These data comprise 1000 syphilitic and 2200 general paretics. They found that the general-paralysis curve constructed from the data at hand showed the ages of thirty-five to forty years to be the most frequent period of the beginning of the disease, and the syphilitic curve was found to place the greatest number of patients in the age-period of twenty-two to thirty-two years; this makes practically twelve to thirteen years between the maximum of the two curves, which is the usually accepted period found to exist between the contraction of syphilis and the onset of general paralysis. If we can know to a certainty that these statistical ages can be vouched for in future much may be done in the prevention of general paresis, a disease at present regarded as hopelessly incurable when once established.

ECHOES AND NEWS.

NEW YORK.

Bequest to Metropolitan Hospital.—Dr. Henri Guilbeault has bequeathed the sum of two thousand dollars to the Metropolitan Dispensary and Hospital for Women and Children.

New York Doctor Wins Prize.—Dr. S. A. Knopf of New York has been awarded at Berlin, July 31st, the prize of 4,000 marks (\$1,000) offered by the Tuberculosis Congress for the best essay on the subject "How to Fight Tuberculosis as a Disease of the Masses."

Physician Fined for Fast Driving.—Dr. Wallace C. Clark of West Thirty-fourth Street, who was arrested while answering an emergency call in his automobile, Wednesday night, by a bicycle policeman, was fined \$3 by Magistrate Mayo in the West Side Court. The Magistrate said that the law did not allow him to discriminate in favor of physicians.

The New York Medical Journal.—Owing to the financial trouble of Messrs. D. Appleton & Co., the New York Medical Journal has been sold to Mr. A. R. Elliott, owner and publisher of the American Druggist. Dr. Frank P. Foster will continue as editor.

Contagious Diseases.—For the week ending July 28, 1900: Measles, 121 cases and 8 deaths; diphtheria, 158 cases and 23 deaths; laryngeal diphtheria (croup), 5 cases and 4

deaths; scarlet fever, 60 cases and 3 deaths; chicken-pox, 5 cases; tuberculosis, 225 cases and 144 deaths; typhoid fever, 25 cases and 13 deaths; cerebrospinal meningitis, 7 deaths; totals, 599 cases and 202 deaths.

Water Cut Off from Schools.—The scarcity of water in Brooklyn has caused the Deputy Commissioner of Water-Supply to issue an order cutting off the supply from all the vacation schools and playgrounds having automatic tank equipment. This order has been put into effect and as a result thirteen of the Brooklyn schools have been closed. Edward G. Ward, Borough Superintendent of Schools, will appeal to the Health Department of Brooklyn for relief. Such a step as this is little short of disgraceful. Proper attention to the unnecessary and extravagant "leakage" would doubtless render this action entirely unnecessary.

New Montefiore Home.—The country sanatorium of the Montefiore Home at Bedford Station on the Harlem Railroad, about thirty-nine miles from New York, is rapidly nearing completion. There is a central building about 60 feet square and two stories high, which will contain the offices and the living rooms of the staff and a large dining-hall for the patients. On either side of this building are two wings, 155 feet long and 35 feet wide. Two of these are for men and one each for women and children. An inclosed corridor at the rear connects all these buildings, and back of this corridor there are the kitchen, laundry, and boiler-house. The whole place will be lighted by electricity; the water for the place will be taken from artesian wells from which the supply is pumped to a reservoir on a hill near the buildings. Broad verandas and sun-parlors are parts of each wing, and in each wing there are also several small rooms for the accommodation of one or two patients, besides the large well-ventilated wards with from twenty to twenty-five beds each.

City Assumes Hospital Debt.—The Board of Estimate and Apportionment held a meeting in the Mayor's office July 26th for the purpose of closing the arrangement between the city and the Brooklyn Homeopathic Hospital. Under an act passed by the last Legislature and approved by the Mayor, the city undertook to purchase the hospital and run it as a public institution. When the details came up for settlement there were \$70,000 in debts on the hospital, which the city has assumed. The understanding is that the institution shall be continued as a homeopathic hospital.

The Blind of New York State.—Considerable interesting information is contained in the report of the Committee on the Blind of the State Board of Charities relative to its annual visitation to the State's several institutions for the care of the blind. It found but 127 inmates in the New York Institution for the Blind in New York City. This is under private management, but its expenses are chiefly met by appro-

priation from the Legislature in the form of scholarship fees for the maintenance and education of the pupils. The number of inmates in the institution was smaller than for several years, and about 100 fewer than a year ago. The State School for the Blind at Batavia is the only institution for the blind supported and maintained wholly by the State. The capacity of the school is for 120 inmates. The institution is crowded to its uttermost, and there are a number of applications for admission on file, which should receive favorable consideration. The children appear healthy and orderly. Intellectual and mechanical instruction is given to the pupils. They take the regular Regents' examination with gratifying results, which speaks well for their capacity and the thoroughness of instruction. Forty are instructed in typewriting. This is of much value to the pupils, they become independent of assistance in their correspondence, and are furnished the means to express their thoughts on paper. Piano-tuning is the chief industry taught. The expert piano-tuner, be he blind or possessed of sight, meets no opposition from the labor-saving machine. Most of the graduates of the school who are proficient in this work can make a comfortable living. Chair-caning, broom-making, plain sewing, embroidery, and other industries are taught.

The Elmira Reformatory.—Superintendent Brockway has resigned and Dr. Frank W. Robertson has been appointed as his successor. Regarding the duties of the new incumbent the *New York Times* pertinently says: "Dr. Robertson, the new Superintendent, has the confidence and good opinion of many of the leading physicians of New York City. He has had experience in Bellevue. He will be unwise if he enters upon his duties under any bias derived from the attacks made a few years ago upon Superintendent Brockway and recently renewed. The Elmira Reformatory is not a place where tearful penitents go about all day with faces uplifted in prayer, abjuring sin and proclaiming with the deep fervor of sincerity their high resolve to lead better lives. Within the walls of that institution are shut up some of the most depraved young savages on the face of the earth. Far more unmanageable than the experienced criminals of the prisons, full to the skin of 'gutter devil,' and with spirits quite unbroken, they are open to no appeal on the side of better nature, and yield to no influences save those of pain and fear. Mr. Brockway knew this very well. He was ferociously abused because he employed the only methods that he knew or that anybody knew to be effective, and he knew more than anybody else about those matters. Until a young reformatory patient becomes manageable and submissive his sojourn in the reformatory can do him no good. He will never be 'cured' of his criminal impulses, never be fit to go at large. That was the object of Mr. Brockway's policy. It will be the object of the new Superintendent's policy if he is to escape failure."

PHILADELPHIA.

Death from Broken Neck.—Louis Vogel, of whom mention was made last week, died at the Samaritan Hospital July 25th, three weeks after the fourth cervical vertebra was fractured. He had regained some power in the left side during the few days preceding his death.

State Board Examination.—The report of the Board of Medical Examiners shows that at the examination held June 26-29th, 330 graduates of the regular school were candidates for license. Of this number one retired because of sickness, one was expelled for attempted cheating, and 41 were considered unworthy of a license. This is a low percentage of failures.

Hospital Bequests.—St. Timothy's Hospital, Roxborough, is rapidly increasing in efficiency because of several substantial bequests lately received. Among these are \$10,000 from J. V. Merrick, Sr., one of \$5,000 from John H. Dearnley to endow a bed in memory of his daughter, and one of \$50,000, toward the expense of the new annex now building, from Percival Roberts, Sr.

College of Physicians.—The will of the late Dr. John Ashhurst, Jr., provides for a handsome addition to the library of this institution. The College is to have its selection from his books of a number not exceeding 1500 volumes.

Physician Arraigned for Neglect of Duty.—Dr. O'Reilly was arraigned before one of the city magistrates charged with failure to report a case of diphtheria. His accuser stated that the physician was attending a case next door to him, that he did not report it, and that his child contracted the disease and subsequently died. Dr. O'Reilly testified that the case he was attending was one of follicular tonsillitis. The Court refused to hold the physician responsible for the death of the complainant's child and dismissed the case.

Pennsylvania Hospital.—Dr. Robert Le Conte has been elected surgeon to succeed the late Dr. John Ashhurst, Jr., whose place he filled as acting surgeon during the latter's illness. Dr. Le Conte is also surgeon to the Children's Hospital, the Bryn Mawr Hospital, and assistant surgeon to the Orthopedic Hospital.

Health Report.—Deaths in the city for the week ending July 28th were 514, a decrease of 50 from those of last week and an increase of 33 over the corresponding week of last year. The heat was responsible for 140 deaths, among these being 26 from sunstroke. From cholera infantum there were 75 deaths. There was one fatal case of cerebrospinal meningitis. Contagious diseases: Diphtheria, 46 cases, 8 deaths; scarlet fever, 17 cases, 1 death; typhoid fever, 49 cases, 12 deaths.

Increase of Insanity.—The annual report of Dr. John B. Chapin, Chief Physician to the Pennsylvania Hospital for the Insane, gives some interesting facts regarding the class of people furnishing the greatest increase in the number of cases. The report includes the Philadelphia Hospital, which receives only the indigent insane of this city, and also the admissions from the city to the Norristown, Pennsylvania, and Friends' Asylums. The increase of insanity in Philadelphia since 1890 is shown to be principally among the poor, the percentage of the entire number of cases from the city rising from 41 per cent. to 60 per cent. in the Philadelphia Hospital. The Norristown Asylum shows a decrease from 42 per cent. to 24 per cent., while the Pennsylvania and Friends' Asylum maintain about the same average. The number of new cases in proportion to the entire population of the city has increased from 1 in 1525 in 1890 to 1 in 1317 in 1899.

CHICAGO.

Illinois River Not Polluted by Drainage Canal.

—The State Board of Health has issued the advance reports of the sanitary investigation of the Illinois River and tributaries made before and after the opening of the Chicago Drainage Canal. Much has been said about the injury that would result to the waters of these streams by the turning of Chicago sewage into them, and for this reason the Board ordered the investigation made. Dr. Egan, Secretary of the Board, to whom were intrusted the investigations, secured the services of Professor John H. Long of Northwestern University to make the analysis. The advance report does not mark the close of the investigations, for they will be continued and collections of waters made weekly until the close of September. The final report will be made about December 1st. The last time the State Board of Health made a report upon the water-supply was in 1899. Professor Long made collections of water at twenty different points on the rivers that might possibly be affected by the drainage canal. Comparisons were made between these samples and those of the headwaters of several streams. The principal point divulged by the investigations is the fact that the waters of the lower Illinois River at least are not polluted by the flow from the drainage canal. The amount of organic matter disappears rapidly after leaving Bridgeport. Professor Long says that Peoria cattle-shed filth and not Chicago sewage is the main factor in the pollution of the lower river.

Report on Public Charities.—The report of the State Board of Public Charities for the quarter ending June 30th has just been published. It shows that the total number of inmates of the State institutions at the close of the quarter was 9251. The gross *per capita* cost of maintenance was \$39.44 and the net *per capita* for the State was \$34.81.

Mortality Statistics.—According to the bulletin of the Health Department of this city, the mortality for the week ending July 21st is very gratifying when we consider the various changes in temperature, humidity, etc., during that period. The death-rate per thousand was 12.78, which is a marked improvement on that for the corresponding week of 1899 which was 17.27. The total deaths from all causes were 454; 263 males and 191 females; 136 were under 1 year of age; 53 between 1 and 5 years, and 64 over 60 years. The chief causes of death were: Acute intestinal diseases, 100; Bright's disease, 17; bronchitis, 11; consumption, 45; cancer, 21; diphtheria, 11; heart-disease, 29; nervous diseases, 52; pneumonia, 15; suicide, 4; violence aside from suicide, 26; and sunstroke, 15. During the 20 years from 1880 to 1899, the death rate of the city has progressively decreased, as follows: 1880-1884, 12,319 deaths, 21.9 per thousand; 1885-1889, 14,860 deaths, 19.2 per thousand; 1890-1894, 25,363 deaths, 17.9 per thousand; 1895-1899, 33,515 deaths, 14.2 per thousand. The decrease has been marked as regards infant-mortality. In 1880-1884 the deaths under 5 years of age were 52.2 per cent. of the total; in 1885-1889 this percentage was reduced to 48.7; in 1890-1894 to 45.5 and in 1895-1899 to 38.8. Thirty-four cases of diphtheria were reported during the week, 34 of scarlet fever, and two of measles. There were 466 samples of milk and cream analyzed in the laboratory, 6 per cent. of which were found below grade. No new cases of smallpox have been discovered. Twelve individuals who had been exposed to contagion from the case last reported and who had not been previously vaccinated were vaccinated, and in each case typical primary results followed.

Resignation of Professor Klebs.—Dr. Edwin Klebs, who was Professor of Pathology in Rush Medical College and Director of the Laboratory in the Post-Graduate Medical School, has resigned. It is said that after a few months spent in Switzerland he will go to Germany and locate there.

Crusade Against Rag and Junk-Shops.—The chief sanitary officer of this city has placed most of his force on this work and will compel every owner of this class of shops to comply with the health regulations. Many of the rag dealers, it is said, are so anxious for business that they buy rags which they know to be unsafe.

GENERAL.

Americans Receive Honorary Degrees.—The festival celebrating the centenary meeting of the Royal College of Surgeons, which began on Wednesday, July 24th, was the occasion for the presentation of diplomas of honorary fellowship to a large number of distinguished personages from all parts of the world, including Lord Salisbury and Lord Rosebery. The Americans who were honored in this way are Dr. W. S. Halsted of Baltimore, Dr. W. W. Keen of Phila-

delphia, Dr. Robert F. Weir of New York, Dr. J. C. Warren of Harvard, Mr. I. H. Cameron of Toronto, Sir W. H. Hingston of Montreal, and Sir T. G. Roddick of Montreal.

Obituary.—Dr. George W. Lewis, a well-known physician of Buffalo, and a nephew of the late Dr. Dio Lewis of New York City, died from an attack of apoplexy July 24th.—Dr. Dennis L. Shea died July 24th after a short illness from meningitis at his home in New York City. He was born in New York in 1865 and took his degree as doctor of medicine at the New York University Medical School. After some time spent as a physician at St. Vincent's Hospital he began practising on the west side.

Mother of Eighteen Children.—Mrs. H. Goulet of Broad Street, Marlborough, Mass., July 24th, gave birth to a daughter, who, according to the family schedule, was No. 18.

The American Association of Obstetricians and Gynecologists.—This society will hold its thirteenth annual meeting in the Assembly room of the Galt House, Louisville, Ky., Tuesday, Wednesday and Thursday, September 18, 19 and 20, 1900, under the presidency of Dr. Rufus Bartlett Hall of Cincinnati, O.

The Roentgen Society.—The Roentgen Society of the United States will meet in New York City, December 13 and 14, 1900, at the Academy of Medicine. Papers have been promised by eminent men abroad and here, and a very successful scientific meeting is assured.

Weight of an Elephant's Skin.—Students in dermatology will be interested in the skin of the monster elephant Charlie, once the great attraction of the Crystal Palace, London. The skin weighs no less than a ton, or exactly one-fourth of the total weight of the animal during lifetime. Charlie's height was ten feet three inches.

More Medical Officers Needed.—Surgeon-General Sternberg says that 100 additional medical officers are wanted for duty in the Philippines and China. Only graduates of reputable medical colleges, with some experience, and under forty years of age, will be accepted.

Smallpox.—The situation at Nome is officially reported as greatly improved and the epidemic under control. At Dawson four cases are reported, the infection having been recently introduced via the Yukon. At Lowell, Mass., a recrudescence has occurred and on July 27th thirteen cases were reported at the Quarantine Hospital. Reports from the South and West indicate a persistence of the disease at many centers.

Yellow Fever.—There has been a steady and fairly rapid increase in the number of yellow-fever cases reported at Havana, and the disease seems to be cropping up almost anywhere in

the parts of the town where it usually prevails. There were reported in all 21 cases during the week ending July 15th. Thirty-one cases and 12 deaths occurred during the first half of July, which, when one considers that the whole month of June yielded only 17 cases and 6 deaths, show a sharp increase. The normal death-rate among civilians for the month of July is 23. Fears that yellow fever would interfere with the transfer of the First Infantry have been removed. The surgeons report that all signs of it have disappeared and that the embarkation is proceeding with all possible despatch. In the Province of Santa Clara 6 cases have been reported and 2 cases in the military camp.

Trouble in the British Medical Association.—There has been a growing feeling among the members of the British Medical Association that its Constitution and By-laws have outlived their usefulness. Accordingly a new document was drafted under the auspices of the Council and an extraordinary general preliminary meeting was called and held a week in advance of the regular annual meeting for the purpose of considering the proposed new Constitution and properly launching it at the regular meeting this week. To the apparent amazement of the Council the resolution to adopt was promptly voted down. The *British Medical Journal*, in commenting on the situation, recognizes the fact that there is always an instinctive impulse in a certain class, the constitutional "Kickers," to go "agin the Government," and looks forward to more favorable action this week. It says: "With the administrative experience of the older members of the Association on the box, helped perhaps by some of that common sense on which the Association was asked to rely, we may hope that neither the fiery enthusiasm of the 'leaders' will be allowed to take the coach into a position of danger, nor the caution of the 'wheelers' prevent that progress which is necessary to satisfy the aspirations of the general body of members. It may be consoling to the Council to know that there are others who have similar troubles.

Statistics of Railroad Accidents.—The record of railway casualties for the year ending June 30, 1899, shows that in the United States 51,743 mishaps occurred, 7,123 resulting fatally. Of railway employees, 2,210 were killed and 34,923 were injured. With respect to the three general classes of employees, casualties were divided as follows: Trainmen, 1,155 killed, 16,663 injured; switchmen, flagmen, and watchmen, 273 killed, 2,992 injured; other employees, 782 killed, 15,268 injured. The casualties resulting to employees from coupling and uncoupling cars were persons killed, 260; injured, 6,765. The corresponding figures for the preceding year were: Killed, 279; injured, 6,988. The number of passengers killed during the year was 239, and the number injured was 3,442. Corresponding figures for the previous

year were 221 killed and 2945 injured. In consequence of collisions and derailments, 82 passengers were killed, and 1557 passengers were injured. The total number of persons, other than employees and passengers, killed was 4674, injured 6255. These figures include casualties to persons classed as trespassers, of whom 4040 were killed and 4730 were injured. The total number of persons killed at highway crossings was 693, injured 1125, distributed as follows: Employees, 19 killed, 38 injured; passengers, 2 killed, 17 injured; other persons trespassing, 170 killed, 168 injured; not trespassing, 502 killed, 902 injured. The number of persons killed at stations was 443, injured 3306. This statement covers: Employees, killed 83, injured 2139; passengers, killed 37, injured 580; other persons trespassing, killed 282, injured 444; not trespassing, killed 41, injured 143. The summaries containing the ratio of casualties show that 1 out of every 420 employees was killed, and 1 out of every 27 employees was injured. One passenger was killed for every 2,189,023 carried, and 1 injured for every 151,998 carried. Ratios based upon the number of miles travelled, however, show that 61,051,580 passenger-miles were accomplished for each passenger killed, and 4,239,200 passenger-miles accomplished for each passenger injured.

School-Children's Eyes.—Dr. Walter Pyle of Jersey City Heights has at the request of the School Board examined the eyes of 351 children attending school No. 1 on York Street, Jersey City. Of these only 69 had perfect eyesight. Seventy-one of the children not only had imperfect vision, but their eyes were in danger of becoming permanently affected.

CORRESPONDENCE.

OUR LONDON LETTER.

[From Our Special Correspondent.]

LONDON, July 21, 1900.

THE ARMY HOSPITAL SCANDALS—DR. CONAN DOYLE'S EXPLANATION—SMALLPOX IN LONDON—SPREAD OF THE DISEASE THROUGH FAILURE OF THE DOCTORS TO DIAGNOSE IT—SUCCESS OF THE LONDON SCHOOL OF TROPICAL MEDICINE—THE POLYCLINIC—PROGNOSIS OF MITRAL STENOSIS—"AUSTIN FLINT'S MURMUR"—CENTENARY OF THE ROYAL COLLEGE OF SURGEONS.

THE Army Hospital scandals in South Africa still continue to be hotly discussed in the press, and general dissatisfaction is expressed at the attitude of the Government and the composition of the commission of inquiry. It is generally agreed that the medical profession must not be allowed a preponderating voice on the commission. A letter from Dr. Conan Doyle, the well-known novelist, who many years ago abandoned medicine for literature, but who on the outbreak

of the war volunteered his services as a hospital surgeon, is important in this connection. [Dr. Conan Doyle's letter appeared in the MEDICAL NEWS, July 21.—Ed.]

Since the beginning of the year from 60 to 70 cases of smallpox have occurred in London. Apart from 6 cases which apparently were unconnected with each other or with any other case, there have been 5 series of cases in which each case after the first was traceable to the latter. In a considerable number of cases the disease was unrecognized at first, and not until subsequent cases occurred, through direct or indirect contagion, was the diagnosis made. In one instance a valet occupying a flat in a block of residential buildings fell ill. He was seen by several doctors and said to be suffering from measles. He died on May 9th, and his death was certified as from that disease. Subsequent events showed that smallpox was the malady. The son of the deceased, an innkeeper in a Midland town, attended the funeral on May 11th. He fell ill on his return home and was supposed to be suffering from eczema; but his child, servant and nurse, took the disease which was found to be smallpox. Meanwhile, the widow was so much effected by her loss that it was thought well to place her in a parochial infirmary, where a ward attendant acquired smallpox from her clothing. When discharged she went to her stepdaughter's, where, on May 17th, she took her own and her late husband's clothing. On May 21st she was found to be suffering from smallpox. On May 29th one of the stepdaughter's children, and on June 1st another were taken ill with smallpox. On June 11th a laundry employee was reported to be suffering from smallpox. Three doctors had seen her and thought she had chicken-pox. On June 25th her sister-in-law was found to be suffering from the disease. It was then ascertained that the laundry company had washed for the valet. The numerous mistaken diagnoses in this series of cases need not produce surprise. Smallpox is now such a rare disease in English practice that the great majority of practitioners have never seen a case. In 1871, 1000 deaths occurred in London from smallpox out of a population of three and one-half millions; last year there were only 3 deaths out of a population of four and one-half millions.

The progress made by the London School of Tropical Medicine, in which the Colonial Secretary has shown so keen an interest since its opening in October last, has exceeded expectations and the question of enlargement is now engaging the serious attention of the committee. Seventy-six students have taken out courses of whom 31 were from the Colonial Office and 4 from the Foreign Office. There were also 7 missionaries and 34 private students, 7 of the latter being women graduates. It is anticipated, moreover, that when the Boer War is over a large

number of medical men from South Africa will seek admission. Both the museum and the library are growing apace.

Sir William Gairdner delivered a highly-instructive lecture at the Polyclinic on "Clinical Memories," in which he discussed a large number of subjects in the light of his mellowed experience. He thought that the gravity of the prognosis of mitral stenosis was much overstated in text-books. The late Dr. Angus Macdonald, in a work entitled "Heart-Disease in Pregnancy," described mitral stenosis as a complication of the greatest possible gravity; but a series of observations at the Glasgow Royal Infirmary, carried on over a long period, shows that this statement was exaggerated. Some of the patients had borne numerous children and been subject to conditions of prolonged anxiety and mental strain, yet they remained free from symptoms of heart-disease. In some cases mitral stenosis had been discovered accidentally or in later life. Sir William Gairdner concluded that mitral stenosis was in many instances a condition which caused but little disturbance even over a term of many years and while it necessarily involved risk the prognosis was not invariably grave. With regard to Dr. Austin Flint's murmur—a presystolic murmur with a normal mitral orifice and an incompetent aortic—when in 1865 Dr. Flint announced that he had seen two such cases, Sir William was incredulous. It seemed to him almost inconceivable that aortic regurgitation could possibly produce a murmur similar to that distinctive of mitral stenosis. The explanation that with much aortic regurgitation the left ventricle always contained sufficient blood to float up the mitral curtains to such a height that they constituted a virtual obstruction to the flow of blood from the auricle, did not find any confirmation in his own experience. But in recent years he had met with two cases which somewhat modified his view. He showed a specimen from one—a small aneurism just above the aortic valves projected so that it might during life diminish the size of the mitral orifice and so lead to a mitral obstructive murmur. The mitral valve was healthy, yet during life there was a rasping presystolic murmur and a presystolic thrill.

The centenary of the Royal College of Surgeons will be celebrated this month with fitting pomp. The events include demonstrations in the museum by the Curator, Prof. Stewart, the Conservator, lantern demonstrations by Dr. T. G. Brodie, Director of the Laboratories, full dress conversazioni, conferring of honorary fellowships on distinguished foreign surgeons, a festival dinner at which the Prince of Wales will be present, an exhibition of objects of interest in connection with the history of the college, and a conversazione at the Mansion House given by the Lord Mayor.

TRANSACTIONS OF FOREIGN SOCIETIES.

French.

ECTOPIC TESTOS—GELATIN INJECTIONS IN ANEURISM—GNATS IN SMALLPOX—DYSENTERIC ENTERITIS—TUBERCULOUS KIDNEY—OTITIS MEDIA AND BRAIN ABSCESS—CONSERVATIVE OOPHORECTOMY—TYPHOID FEVER SECONDARY TO INFLUENZA—ORTHOSTATIC ALBUMINURIA—SURGICAL ASEPSIS—URETERAL CATHETERISM—PERINEAL INCISION FOR PELVIC ABSCESS—VOLVULUS DURING PUERPERIUM—RAW MEAT AND TUBERCULOSIS.

LUCAS-CHAMPONNIERE, at the Academy of Medicine, June 5, 1900, presented a patient, twenty-two years old, who had had double abdominal ectopic testicles and double hernia as well, operated on twelve years ago. His symptoms were general poor health and emaciation, and crises of pain in the right inguinal region. Double radical cure, with search for liberation and suture of the testicles to the scrotum, was done, first on the right, then on the left side. After considerable time the left organ showed signs of pain and troubled the patient so that it was removed. The cure of the hernias was complete and perfect. The right testicle remained healthy and in its new position and the sexual functions were normal. In all his other cases of a similar kind the testicles have been in the inguinal canal, but in this both were within the abdomen. Commonly these testicles are bound in place by fibrous lamellæ, all of which must be minutely dissected away before liberation is at all adequate and the organ can be brought down and sutured to the scrotum with any prospect of success. In about 45 cases throughout his experience this was the secret of his success. Castration should always be a last resort. The radical and permanent cure even without subsequent bandage or truss support has always been the rule in his cases.

LANCEREAUX presented a man who developed a large aneurism of the aorta two years ago. Thirty injections of gelatinized serum served to make the tumor decrease and harden. He had chronic malaria. Increase in weight and strength followed the treatment.

HERVIEUX reported the observations of a military surgeon during an epidemic of smallpox in a French provincial town. One quarter was sorely stricken, another not. In the latter there were no gnats and there had been no winds to carry them. Hence, the suggestion is offered that gnats may carry the germ of smallpox about as the mosquito carries the organism of malaria.

ROUSSEAU SAINT-PHILIPPE (Bordeaux) stated that dysenteric enteritis of infants is happily affected by powder from fresh paste of guarana. A cold maceration is slowly made and the dose varies from half to two grams in twenty-four hours.

POUSSON (Bordeaux) presented a tuberculous

kidney of unusual size, the seat of cystic degeneration and complete caseation of the kidney substance. The patient developed pulmonary tuberculosis after the organ had been removed. Another specimen on exhibition was that of a kidney apparently the seat of miliary and nodular tuberculosis, but microscopically the lesion was of the colon bacillus.

ROUTIER reported a case in which some years ago he found a kidney the substance of which on nephrotomy was filled with more or less indefinite nodules. He decided to leave it *in situ*, merely suturing it up in position. Cure followed.

POTIERAT had cured a case of unilateral pyonephrosis by nephrotomy. The result was without fistula.

DIEULAFOY at the meeting of June 26th detailed the following history: Male, thirty-one years old, soon after a mild suppurative otitis media was attacked suddenly by persistent, severe occipital headache, incoordinate, stumbling gait, ictus apoplectiforme, vomiting, somnolence, also falling toward the left; soon were added left facial paresis, nystagmus and bilateral retinitis. Cerebellar abscess was explored for in vain. At the autopsy was found a nut-sized abscess on the superior surface of the cerebellum. The case led to the following considerations: With rare exceptions cerebellar abscess is secondary to otitis media, whether acute or chronic, with or without exudation. The pus in the tympanic cavity, by reason of being in a close space, increases its virulence, soon spreads to the mastoid cells and antrum, and thence may be scattered in many directions, setting up cerebral or cerebro-spinal meningitis, pachymeningitis, phlebitis or thrombosis of the sinuses, cerebral or cerebellar abscess, etc. The cerebellar syndrome is as follows: Cephalalgia, chiefly occipital; vertigo; jaundice; incoordination; stumbling, erratic gait; vomiting; nystagmus; cervical contracture; optic neuritis; muscular asthenia, somnolence or torpor, almost coma. Facial paresis and affection of the external oculomotor nerve are elements pointing to a localization of the trouble. This syndrome is very like that of mid-ear and labyrinth disease, but the following are important differential data. The pain in disease of the labyrinth has not the suddenness, intensity or localization of that of cerebellar abscess, and the somnolence and torpor of the latter are far greater. Again, all the motor signs in cerebral abscess are on the opposite side of the body to that of the lesion and of the otitis, pareses, paralyses, spasms, contractures, etc. Affections of speech and hemanopsia also bear upon the diagnosis. Tumors of the cerebellum give the same picture as abscess or more commonly add extraneous features by the lawless infiltration of the growth. Surgical evacuation of the pus is the sole treatment.

LABORDE said that gray cerebellar matter appears inexcitable, but when the tumor involves

the pedicle fibers symptoms ensue. Experimentation demonstrated accurate localization of lesion in each peduncle. A lesion in the middle peduncle causes the animal to turn on its own axis; in the superior peduncle, a variety of movements; in the inferior peduncle, a fall or a turning to the side of the lesion.

GERNE (Rouen) said that from October, 1898, to May, 1900, in 28 laparotomies he had ablated both tubes only seven times. In the cases in which they had been spared, nine were little altered, twelve very much so, and four were in a state of pyosalpingitis. Only one death had occurred from peritonitis. Among the others the results were very satisfactory, inflammatory exudate and uterine enlargement had decreased, and in many after several months the conditions were almost normal.

POTAIN at a meeting of the Society of the Hospitals, June 1st, called attention to the great number of cases of grip which later developed typhoid fever. The transformation regularly occurred in his six cases during the course or the decline of the grip or at the beginning of convalescence. The temperature ascended, headache dull and heavy, tumefaction of the spleen, ballooning of the abdomen, gurgling in the right iliac fossa, and rose spots, with a positive serum reaction, soon appeared. The course was not especially grave or severe, the fever averaged low, the pulse varied from 90 to 120, arterial pressure usually decreased, convalescence appeared about ten or twelve days after the spots. All of his cases recovered but fatalities sometimes occurred. There is nothing new in the combination of the two diseases, but during the last epidemic it had occurred very often. The accuracy of the diagnosis of the grip was undoubted, owing to the typical symptoms of the prodromic and invasion stages.

MENETRIER noted a case of grip followed by a benign typhoid, which, however, developed a phlebitis of the internal saphena. During the grip the diazot-urea reaction of Ehrlich and the serum reaction of Widal were absent, but they were positive during the typhoid.

RENDU reported the cases of two children who were attacked by grip, then by typhoid fever. Both recovered.

SIREDEY recalled the death in 1889 of a young physician who contracted typhoid fever with albuminuria fifteen days after an attack of grip.

WIDAL stated that the diazot-urea reaction of Ehrlich is not a definite diagnostic point, because it appears in other pyrexias as well. Again, it is erroneous to exclude the diagnosis of enteric fever because the onset of the symptoms is unique and acute. There are many cases in which the disease begins as acutely and severely as grip.

SEVESTRE said that intense onset of typhoid fever is common in children.

RENDU gave the details of a case of pneu-

monia in a man, fifty-six years of age, which was complicated by a purulent sinovitis of the left sternoclavicular articulation and a serous one of the knees. The fluid in each joint contained purely pneumococci of virulence. The former had to be opened, washed, drained, and the latter aspirated and immobilized in order to effect a cure.

BECLERE gave the procedure for estimating the size of the heart by the radiograph.

WIDAL said at the session of June 8th that, although typhoid fever usually has a gradual invasion with a distinguishable prodromal stage, it may begin with great intensity and suddenness, especially in patients enfeebled by preliminary disease. He cited the following recent instances: A man in good health after dancing was suddenly attacked, took at once to bed, gave a marked serum reaction after five days and ran a typically severe course. Another patient while on a voyage and in fine health was suddenly seized with chills and terrific headache; typhoid fever developed from this outset. In another case a woman was overtaken while at her vocation in much the same way. The blood-cultures, 1 to 150, gave prompt agglutination after three days. Hence typhoid fever should be thought of, although the outset may not be slow and insidious, but rapid, frank and violent, much like a pneumonia.

VINCENT added that among the young soldiers in Algiers he had seen many such cases. Often they were ascribed to combined malarial and enteric invasion. In his studies this was very far from the case. These cases ran a longer course with less promising prognosis than is the rule.

WIDAL differed by saying he had had no fatalities among his cases of this type, although one had had tuberculosis for four years.

ARCHARD at the meeting held June 22d stated the history of a young girl suffering from orthostatic albuminuria. The albumin always appeared in the erect and disappeared in the recumbent position, and if rest in bed were maintained it took some time for the erect posture to cause a relapse. She showed no neuropathic stigmata, no vasomotor phenomena of the extremities—both so common in these cases. The sole cause appeared a febrile condition at six years of age with convulsions and albuminuria. Cryoscopic study demonstrated normal molecular concentration of the serum and the urine. The renal circulation, estimated according to the method of von Koranyi, was rapid. The elimination of methyl blue was normal for the quantity but slightly delayed. Phloridzine regularly caused glycosuria. The same results were obtained during crises of albuminuria and periods of normal urine. The conclusion is that only portions and not the whole of the parenchyma is at fault.

WIDAL agreed with the speaker that these light

degrees of albuminuria certainly denote some kidney lesion. He has never seen a case of orthostatic albuminuria, but desired to report two cases of slight albuminuria. One in a child of twelve years, who when six years old had scarlatina and malaria when eight. The methyl-blue test was normal. But the albuminuria persisted without any signs of uremia. The second patient was twenty-nine years of age and fourteen years ago had had typhoid fever. His kidneys did not filtrate rapidly methyl blue, iodide of potash or sodium salicylate, but the albuminuria is the sole symptom of his disease.

REYNIER at the meeting of the Surgical Society May 30th said his idea of surgical asepsis is concerned in never having direct contact with pus and in keeping the hands protected in such examinations as those of the rectum. He differed widely from Quénu who claims asepsis is preferable to antiseptics. In his experience certain antiseptics, perhaps especially permanganate of potash, produce a sufficiently reliable asepsis of the hands. The middle course seemed wisest, namely, combining good antiseptics and careful asepsis.

DELBET contrary to the assertions of Quénu claims that the hands may be made sterile in general and in particular after infection by contact with even the most virulent germs. This has been proved by his experiments of plunging the hands and arms into cultures of both aerobic and anaerobic organisms, of carefully washing them and then of taking cultures. He found that in each case the cultures remained without growth. He therefore differs from those who claim that a surgeon whose hands have touched pus or the rectum, for example, is not only septic but filthy. His method is not to rely on asepsis rather than antiseptics, but to scrub the hands thoroughly with soap and warm water and immerse in concentrated alcohol, then in bichloride of mercury until they appear well soaked all over.

ALBARRAN differed from the views of Tuffier expressed at the preceding meeting to the effect that ureteral catheterism is not necessary in renal tuberculosis to determine the state of the opposite organ in the general run of cases. In one class the point could be granted, namely, that in which the ureter of the diseased side is occluded and the urine from the bladder is normal. In all other cases the mixed urine is almost certain to be infected and the use of the ureteral exploration necessary. He holds that it is not indicated to leave such a catheter *in situ* longer than to collect a specimen, states that in a large number of observations he has never found it dangerous, and in general compares it to vesical catheterism which one does not hesitate to practise because it is occasionally followed by unfavorable results.

DE LANGLADE (Marseilles) reported a case of low pelvic abscess following appendicitis and

situate in front of the rectum and palpable through it. He opened, evacuated, drained and cured the condition through the prerectal space.

ROCHARD reported at the June 20th meeting a case of volvulus in a woman recently confined. The symptoms were those of acute obstruction and the physical signs of a tender, painful, tympanitic tumor in the left side. The volvulus was twisted from left to right and pushed through a false opening in the mesentery. Reduction was easy and recovery complete.

RICHET and HERICOURT at the session of the Biological Society of June 2d presented the results of their experiments as to diet in tuberculosis among dogs. After inoculation one set was fed on ordinary food; a second on cooked meat; all of these two series died. The third set was fed on raw beef and none died. In another series of animals a preliminary feeding of raw beef and beef-juice was given and to a fifth series good ordinary food. Later these two groups were inoculated. All of the latter and not one of the former died within six months. Usually dogs survive the inoculation only three months. The weight of meat should be about one per cent. of that of the animal. The conclusions are that in the dog raw meat and raw beef-juice fortify against the disease by a highly-increased nutrition.

SOCIETY PROCEEDINGS.

THE NEW YORK COUNTY MEDICAL ASSOCIATION.

Stated Meeting held Monday, April 16, 1900.

The President, Frederick Holme Wiggin, M. D., in the Chair.

Suppuration in Middle Ear.—Dr. J. H. Woodward said that in spite of free drainage through the drum membrane in suppurative disease of the ear, the disease may reach the cranial cavity. For safety, the conditions causing the disease must be entirely removed. The objective symptoms are usually sufficient guide to show the necessity for operation. If there is swelling behind the auricle, no physician will refrain from operating; but even in the absence of swelling it is not well to delay too long by using palliative measures. There are six indications for the mastoid operation: (1) Bulging or swelling of the upper posterior quadrant of the membrana tympani, or Schrapnell's membrane, and bulging of the inner extremity of the membrane. The pus is sometimes very tenacious, but the retention of pus is a very serious matter. There should be an incision in the drumhead so as to provide sufficient drainage. It is more prudent to operate than to try palliative measures when the bulging occurs during diphtheria, scarlet fever, or influenza. (2) Persistent tenderness over the mastoid process. The indication is

for operation both in acute and chronic cases, although often there is very little pus and most physicians object to operating unless there is pus. From this opinion Dr. Woodward differs. There may be fungus granulations without the appearance of much pus and there an operation will eradicate. (3) Swelling of the soft parts over the mastoid process. The ear should be opened whenever this swelling is observed. The subsiding of the swelling is no guarantee of cure. (4) Granulations and fistulæ in the external auditory canal. (5) Persistent and relapsing fistulæ behind the auricle. Fistulæ which alternately open and close are more dangerous than those which remain open, as the former are more liable to lead to sinus thrombosis. An early opening of such is therefore indicated. (6) Persistent and offensive otorrhea.

In the discussion Dr. Francis J. Quinlan said that all middle-ear suppuration is suspicious. No life insurance company will accept a man with a chronic suppuration of the middle ear. Moreover, such suppuration is a ready path for the entrance of infection. Any pain over the antrum, pain over the tip, or pain over the middle plate of the mastoid, is sufficient indication for the mastoid operation. Nowadays the operation is not difficult. With a little care the cavity cannot only be emptied, but the whole area thrown open to inspection. It is not only necessary to enter the mastoid process, but it is most important to open all its cells. Any small granulations left may lead to intracranial complications.

Radical Operation for Uterine Cancer.—Dr. Howard A. Kelly of Johns Hopkins asked what systematic effort is the profession making to get at the root of the cancer evil. Of the various forms, cancer of the uterus is the most serious, because of its relative frequency. Welch reports that of 31,482 cancer cases, 29.5 per cent., approximately one-third, were of the uterus. In trying to forecast a method of treatment for the future the dictum worthy of consideration seems to be to remove the entire organ in every case of cancer of the uterus. There is a temptation to do less radical operations—to amputate the cervix, or to remove the body of the uterus—but partial operation is unjustifiable. In 176 cases of his own he has found the exceptions as to limitation of the disease so numerous that they must be reckoned as the rule. In many cases in which he has found the vaginal end of the cervix infected, the body was diseased as well. In one case the disease skipped the body and appeared in the tubes. It is well to remove the tubes with uterus in all cases of cancer of the body.

The next great danger is in the vaginal vault. Cervical cancer often extends down the vagina under the mucosa without at first showing its presence. In every operation, therefore, that part of the vagina in which cancerous foci may be expected to exist should also be removed. The operator should give the disease a wide

berth at the vaginal vault. He should cut 2 to 2½ cm. away from it. The advance of the disease is usually up the cervix into the body. In very advanced cases the whole cervix is eaten away and the broad ligament involved. In many cases in which there is great pain in cancer of the uterus, the pain is not due to the cancer direct, but to the accident of occlusion of the cervical canal by the diseased growth and the consequent imprisonment of the secretions. In such cases there should be an opening through the carcinomatous mass to let out the pus and the patient will get along comfortably in spite of the cancer. Often before the disease has gone very far in any other direction, the bladder has become involved, and there is also, as a rule, considerable involvement laterally. The mode of extension is a point upon which surgeons differ very much. In fact, here is the crux of the whole question. In the extension of cancer of the cervix right and left out through the bases of the broad ligaments the ureters are soon reached, the pelvic walls and the glands are infected and it is difficult to decide what parts are diseased. It is not certain that the disease always proceeds continuously. There may be discrete foci and invasion of tissues by jumps. Dr. Kelly has removed many glands which macroscopically gave the appearance of being diseased, but microscopically proved to be sound. He thinks that the operator should concentrate all his attention upon giving the cervix a wide berth and not worry about tissues beyond. In all but five per cent. of the cases he has seen, progress laterally has been continuous and not by metastases. Winter has reported 42 cases in only two of which the glands were found to be diseased.

Dr. Kelly asked what is the danger of planting cancerous foci in sound tissue during an operation? Experiments on animals have shown that it is impossible to inoculate tissues with cancer unless it is aseptically done and it is, therefore, improbable that there is a liability to such an accident when there is drainage. When there is a recurrence after, say two years, it is a question whether it is not a new growth, rather than a recurrence due to inoculation during the operation.

Do Radical Operations Cure?—There is a certain fear of the radical operation because specialists often feel that there is no lasting benefit and they do it rather as a last resort. In refutation Dr. Kelly referred to 103 cases operated upon. Of 61 cases of squamous carcinoma of the cervix, 20 per cent. are living; of 30 cases of adenocarcinoma of the body, 63 per cent. remained well. Dr. Kelly condemns unqualifiedly the old mode of operating by simply skinning out the uterus, because it is followed too often by recurrence. He advises the catheterizing of the ureters and marking them out by inserting bougies. It is difficult to distinguish the ureters and pushing them aside delays the operation and makes the difficulties almost insurmountable, to say nothing of the risk of injuring them. The disease must be

given space by ligating far out into the parametrium.

Radical Operation.—Dr. Kelly employs a modification of the method of Dr. X. O. Werder of Pittsburg. First he does a thorough curettage, then the vagina is divided on all sides one inch below the diseased area. The vesico-uterine peritoneal fold is widely opened as is also the posterior cul-de-sac. The uterus is brought out through the posterior opening. The peritoneum is protected by gauze-packing. The uterus is then bisected from fundus to cervix. Afterward it is caught by the cervix and split again. The next step is enucleation on the side least diseased. It is Dr. Kelly's method to remove the tissues down to the point where infiltration is deepest and then concentrate all the energy on the most complete removal of the last segment. The peritoneum is then closed over the raw areas made by the excision and the pelvic cavity is lightly packed with gauze. Operating in this way by quadrisecting the uterus, the maximum room and mobility are secured for working through the vagina. The difficulty of the operation really begins when the operator attacks the nodules of disease farthest out and it is a question whether ligature or cautery gives a chance to go deepest. Much credit is due Dr. John Byrne for advocating the cautery in advanced cases.

Old Methods Unsatisfactory.—In discussion Dr. Henry C. Coe said that he has found the old method of skinning out the uterus unsatisfactory. It is followed almost inevitably by recurrence in from two to three years. Some weeks ago he read a paper in which he expressed the view that the operation of the future for cancer of the uterus would be radical abdominal hysterectomy. He thought that this method, although serious, was the most scientific, as it enabled the operator to reach not only the uterus but all suspicious tissues and glands. During an operation it is sometimes very difficult to decide what is diseased tissue and what is merely inflamed. He upholds Dr. Byrne's theory of the value of the cautery. It seems a very rational method and in the hands of Dr. Byrne it has certainly given brilliant results. Cancer does not always seem to extend by continuity; if it did, it would be impossible to explain some of the cases of recurrence. In a case of his there was a small malignant adenoma nodule in a uterus that was removed, yet there was recurrence in the scar. One case was most unfavorable at operation, yet the patient lived five years.

Neglected Cancer.—Dr. E. H. Grandin said that he had examined 3000 women and had found cancer of the uterus relatively uncommon. In all there had been but 48 cases of cancer of the uterus. Of these 30 were seen too late for operation and he had given them the treatment customary in inoperable cases. The great trouble is that cancer of the uterus comes to the specialist too late. The cases under his observation had all suffered a long time from hemorrhages, which

received no attention because supposed to be due to the menopause. He has tried curettage, cautery and caustic applications in advanced cases, and in his opinion the less done the better. In the remaining 18 cases total hysterectomy was the operation of choice where the disease involved the corpus uteri. In 7 cases traced there has been no recurrence. One case was operated on six years ago, the others from six months to four years and a half. In six cases in which the portio vaginalis was involved the operation selected was vaginal hysterectomy, either by clamp or ligature. In 4 cases traced there was recurrence in all but one and that was very recent. Recurrence took place in from eighteen months to two years. From his experience he believed the disease curable if taken early enough. His experience has disposed him to reject vaginal hysterectomy, either by clamp or ligature, for cancer of the uterus. There can be no thorough resection of the broad ligaments by this method, as is possible from above. In any case as much of the vagina as possible should be removed, as this is the site of recurrence. Dr. Grandin thinks that the method of the future will be a combination of knife and cautery, as affording the best protection against recurrence.

Dr. William R. Pryor said that in his opinion the vaginal operation does not meet the requirements laid down by Dr. Kelly. He agrees with the latter that the operation should be the most radical possible, but can this be done through the vagina? To him the vaginal operation seems merely palliative. The operation through the abdomen does not necessitate any preliminary proceedings for marking out anatomical relations, such as bougies for the ureters. Every drop of blood is precious to the patient and the internal iliac arteries should be ligated. This can be done with perfect safety.

Dr. Phineas H. Ingalls of Hartford, Conn., present by invitation, then said that the chief difficulty in successfully treating cancer of the uterus lies in the fact that the general practitioner who first sees the cases ascribes all irregularities of menstruation to the menopause if the patient is between 35 and 50 years. Hence, the disease is far advanced before it comes to the specialist for operation. He would like to know in how many cases treated by Dr. Kelly in which there had been no recurrence for five years, palpation of the broad ligament showed it free from the disease at the time of operation. In his experience operations for cancer of the body do better than operations on the cervix. As for advanced cases the use of cautery and strong caustics seem to him only to aggravate the disease and hasten death. It is better to let them alone. In some advanced cases he has found that those treated by palliative measures without operation have lived nearly as long as those operated on.

Cancer a Local Disease.—Dr. Herman J. Boldt said that cancer of the uterus is undoubtedly a local disease in its initial stages; hence, if the diag-

nosis is correct and the proper treatment resorted to at once, cure will result. The cautery seems to him especially advisable in the treatment of the points where the neoplastic recurrence is most feared. Personally he has had little experience with the method, but the results which Byrne, Mackenrodt and others obtain leave no doubt as to its efficacy. He has treated all cases of cancer of the uterus with a direct mortality of 5.4 per cent. and a mortality from recurrence of 34.2 per cent. Those living with recurrence constitute 2.7 per cent.; those living and free from recurrence, 24.3 per cent. No report has been obtained from 30.6 per cent. After his first year's experience he never did any shelling out. There is great danger, as Dr. Kelly said, of injuring the ureters and he commends the use of bougies.

Dr. George Tucker Harrison endorsed everything that Dr. Kelly said. He wanted particularly to read a lecture to the general practitioner, who does not recognize the gravity of menstrual symptoms that are atypical and so does not send the cancer cases to the specialist soon enough. Cancer is a local disease susceptible of cure if taken soon enough. Instead of 15 to 20 per cent. cured, he thinks there might be 80 to 85 per cent. if the disease were taken soon enough. This is the great point. He is disappointed in his own results by the vaginal route.

Dr. Joseph E. Janvrin said that four years ago last February he read a paper describing sixteen cases of cancer of the uterus beginning in the cervix in which the uterus was simply shelled out. Of the 16 cases, 12 date back four years or more and 1 twelve years. Of these, 4 are living and in perfect health. Of the remaining 4, 1 dates back four months, 1 twenty-two months, and 2 five weeks. Of these 2 died within the year and two are living and well. This gives 37½ per cent. cured. These cases have been selected as showing the outcome when the disease began in the cervix and was in the majority of cases confined to that part. In every instance the diseased condition of the cervix was well marked. He has no record of cases operated upon before four years ago, but his recollection is that the results have been fully up to the percentage given. Out of 30 cases he is sure over one-third has been free from recurrence. In 4 of the 16 the disease extended down upon the mucous membrane of the vagina, yet 3 of these were cured. He believes that when the disease begins in the cervix, it is more liable to invade the vaginal mucous membrane than to extend down under it. He thinks that vaginal hysterectomy should be limited to cases in which the disease is confined to the cervix, or to the cervix and the mucous membrane of the upper part of the vagina, or where the disease, having involved these parts, is beginning to develop on the mucous membrane of the lining of the uterus itself. He thinks a combined abdominal and vaginal operation, or the radical abdominal operation, the best if we are to

resort to radical operation at all. As a rule he does not operate upon advanced cases, but wherever a case is operable it can be successfully reached by the abdominal route.

Dr. J. Riddle Goffe said that recent statistics have shown a startling increase in cancer in England. There are those who claim that this increase is only apparent and not real, due to improved methods of diagnosis; but the men most experienced in cancer statistics insist upon the real rapidity of increase and also that the disease is occurring in younger women than formerly. We can not exaggerate the seriousness of the condition and the results attained are hardly sufficient to encourage the specialist to try to do anything. The proper question should be. What shall we do to prevent cancer of the cervix and uterus? In Dr. Goffe's opinion vaginal operation is the only one justifiable in cancer of the uterus because of the danger of infecting sound tissues by other methods of operation. Dr. Goffe objects to the quadrisection of the uterus as advocated by Dr. Kelly, as the less interference with the diseased tissues, the less the danger of infection. The inverting of a diseased cervix seems to be an excellent way to inoculate the peritoneal cavity. Dr. Goffe avoids inverting the uterus. He draws the uterus well down with a traction clamp and then extirpates it.

Dr. E. E. Tull presented a record of 20 cases of cancer of the uterus upon which he has operated in hospital practice since 1890. Four patients are living. Two of them were operated on in 1890. The operation was by the vaginal route, and in all the cases the diagnosis was confirmed by microscopic examination. He does not consider the vaginal operation easy and in an advanced case would first use the cautery and then open the abdomen and remove the diseased parts as thoroughly as possible.

Dr. H. N. Vineberg said that he has examined about 12,000 women in dispensary practice and among these he has met with only about 12 cases of cancer of the uterus. Most of these women had borne children and had had torn cervixes which had not been repaired. The frequency with which cancer occurs in these lacerations has given color to the view that they cause cancer. The general practitioner is not so much to blame. Sometimes cancer of the uterus does not give rise to suspicious symptoms until it is too late to operate. A woman was recently brought to him the day after she had seen the general practitioner and the case was already inoperable. He agreed with Dr. Goffe's objections and wished to suggest another modification of Dr. Kelly's method, *viz.*, a longitudinal incision in the anterior vaginal wall which will enable the operator to invert the uterus without entering the peritoneal cavity posteriorly.

Dr. Ralph Waldo said that he wanted to ask, What is an operable cancer? Not over one in ten ought to be considered operable and there is rarely a case in which the disease is of six

months' standing which is not so far advanced that recurrence will inevitably take place.

Dr. John Byrne of Brooklyn said that eight years ago he undertook to analyze the published statistics of cancer of the uterus. There has been a great tendency to underrate the danger of hysterectomy on account of the exceptionally favorable statistics of a few of the most successful operators. He looked up 235 cases by the great operators of Germany, France and elsewhere. Of these cases 63, or 27 per cent., had a recurrence. Nothing was said, however, of the other 172. Such gaps make the task of collecting trustworthy statistics almost impossible. Olshausen reported 163 cases. Of these 42 only were living at the end of two years. Of the 155 who survived the operation only 19 ultimately remained free from recurrence. Of late years he has used the cautery freely and roasted the cavity thoroughly. He rarely carries the actual cauterization to the fundus. In circumscribed cancer of the cervix the use of the cautery and the roasting of the cavity are safe and give the best chance of cure. Many of his cases have lived eight or ten years or even longer. The effect of the electrocautery knife on the surrounding tissues may explain the absence of fever and pain after the operation, and the freedom from the disease of the scar tissue in case of recurrence together with the rarity of recurrence. The improved electric apparatus of the present leaves no excuse for apathy in regard to the use of the cautery.

Dr. Kelly in conclusion said that the cause of the cautery as presented by Dr. Byrne is very convincing. He thinks that every atypical uterine discharge should be regarded as suspicious; not only that, but every woman who has borne a child should go to a specialist to be examined. In this way he thinks that the 20,000 cases of cancer which will come to the specialist within the next five years may be saved.

THE NEW YORK ACADEMY OF MEDICINE— SECTION ON SURGERY.

Stated Meeting, held April 9, 1900.

Charles M. Dowd, M.D., Chairman.

Excision of Subclavian.—Dr. John F. Erdmann presented an athlete in whom an accident led to the fracture of the left clavicle involving the subclavian artery. A complete resection of the subclavian was made although the subclavian vein was carefully preserved. For a long time the fracture of the clavicle healed only by fibrous union, and it seemed doubtful whether bony union would ever take place. After a time the man was able to resume his occupation as an exhibiting athlete, the left arm being apparently as strong as before. The pulse is plainly to be felt at the wrist and is as strong as on the other side. The development of the collateral circulation has evidently completely made up for the obliteration of the subclavian.

Sphenoid Sarcoma.—Dr. Joseph A. Blake presented a patient from whom a sarcoma of the sphenoidal sinus was removed three years and eight months ago and has not recurred. The left nasal fossa was at that time completely filled with a tumor, a portion of which was removed. It proved on microscopic examination to be a round-celled sarcoma. Radical removal was then undertaken, previous ligation of the carotid being performed to lessen the hemorrhage. The patient made an uneventful recovery and was able to leave the hospital two weeks after the operation. In the left eye the vision is perfect notwithstanding the disturbance of the circulation by ligation of the carotid.

Bottini's Operation for Suprapubic Fistula.—Dr. Willy Meyer presented a patient who had come to him in November, 1898, with marked urinary symptoms. There was medium enlargement of the prostate and the cystoscope revealed advanced catarrh of the bladder. Three vesical calculi were found to be present. They were removed by the suprapubic route. Infection of the perivesical tissues took place, and the suprapubic incision failed to close completely, and despite various methods of treatment a persistent fistula remained. The man had returned to his work, but was so much disturbed by the presence of the urinary fistula that life became almost unbearable. When he returned to the hospital in November, 1899, about one-half of the urine was passing through the natural passages and one-half through the suprapubic opening. All apparatus for permanent drainage of the bladder were unsatisfactory and so Dr. Meyer suggested a Bottini operation in order to open up the prostatic urethra more thoroughly. With the fistula present there would be very little inconvenience even if enough inflammatory reaction occurred in the prostate to occlude the urethra for some little time after the operation. The Bottini instrument was used and on the second day after the flow of urine through the urethra was perfectly free. The fistula did not, however, close at once. The passage was a tortuous one because of a certain amount of sloughing of the prevesical connective tissue which had taken place shortly after the operation for the removal of the calculi. The urine was in an infected condition from the long presence of the calculi. Balsam of Peru was injected a number of times into the fistulous opening in the hope that it would set up sufficient irritation to cause closure of the tract. It failed to do so, however. Several ounces of water were then injected into the bladder *per urethram* and fifteen minims of pure carbolic acid were injected through the fistula. The amount of water in the bladder was sufficient to make the carbolic acid solution which would result within that viscus less than one-half per cent. in strength. The carbolic acid injection was followed almost immediately by an injection of pure alcohol. After this the fistula promptly closed up and has not reopened since. The patient has gained considerably in weight and is

very well satisfied with the results. As may be noted here, as the result of the suppurative process at the time of the first operation, some destruction of prevesical tissues took place with a resultant dimpling in the suprapubic region.

Removal of One-half of Tongue.—Dr. B. Farquhar Curtis presented two patients from one of whom one-half the tongue and from the other one-half the tongue and the tonsil on the same side had been removed. The first patient, a man sixty-three years of age, denies syphilis, but admits very frequent use of the pipe. Last September he noted a fissure on his tongue which despite treatment refused to heal. Induration followed and in January the enlargement of this half of the tongue was very noticeable. Toward the end of February he applied for treatment at the hospital. The condition was evidently cancerous. One-half the tongue was removed February 22d by a combination of the Kocher and Whitehead methods. The Kocher incision, just beneath the jaw externally, was first made and all the glands into which lymphatics from the tongue emptied were secured and loosened from their position. The lingual artery on this side was then tied, the mouth opened with a Whitehead gag, the tongue split down the middle and removed from within the mouth. By this means very little blood is lost and the tongue is not crowded through the Kocher incision almost surely infecting the tissues in this region, while the glands are much more thoroughly removed than is possible by the Whitehead method alone. The tip of the tongue was then turned around on itself and stitched in place so as to avoid the sharp point that is so disfiguring when the mouth is open. The patient now talks distinctly and swallows easily. He wished to get up a few days after the operation and has been able to be around since the first week.

The second patient, a man fifty-five years of age, suffered for some time from an ulcer of the tonsil which absolutely refused to heal. He also denies syphilitic history and as the floor of the ulcer had become thickened and indurated and the tissues around it were becoming infiltrated, it was evident that a neoplasm was in question. The patient could open his jaw well so that there was no posterior infiltration in the tonsillar regions, but there was considerable infiltration forward into the tongue. The operation chosen was that of Mikulicz. The incision extended from beneath the ear to the ramus of the jaw. The ramus was divided after separating the periosteum and the tonsil removed through the opening thus obtained. The carotid was exposed and tied and the glands lying near it were removed. This procedure gives excellent control of the hemorrhage. This method of operating gives much more room, especially in elderly people, than does division of the jaw. The tongue was found to be much more involved than had been thought. One-half that organ was removed. Recovery was uneventful, although ra-

ther slow. Considerable time was required for the granulation of tissues to close up the opening made. The man is able to talk reasonably well, but he has some difficulty as yet in swallowing.

Tracheotomy Before Removal of the Tongue.

Dr. Willy Meyer said that in these cases of removal of the tongue he has always found it advisable to do a preliminary tracheotomy in order to avoid the aspiration of blood and mucous material from the mouth into the respiratory passages during the course of the operation. As Dr. Curtis made no mention of this procedure he wondered whether he considered it a necessary preliminary.

Dr. Dowd said that by this combination of the Kocher and Whitehead methods of operation, the bleeding is so thoroughly controlled by preliminary ligation of the lingual artery through the Kocher incision that very little hemorrhage results during the operation. There was not, then, any necessity for the preliminary tracheotomy and in Dr. Curtis' absence he could answer that this was not Dr. Curtis' custom.

Dr. Torek said that by the adoption of Rose's position, in which the head hangs perpendicularly, any blood present in the mouth during the operation could be kept from entering the respiratory passages. This position was sometimes spoken of as the Trendelenburg position, but falsely. No mere inclination of the head downward is sufficient to prevent the blood finding its way into the lungs. It must hang perpendicularly.

Dr. Berg reported a case in which as a preliminary to the removal of the whole tongue a low tracheotomy had been done and a diffuse, although not virulent, mediastinitis had resulted and very much complicated the aftercourse of the case.

Monsel's Anastomosis.—Dr. Berg reported a case of rectal cancer which had been operated on some months ago. As the patient was in very bad condition toward the end of the operation, the sigmoid had simply been freed after the removal of some four inches of the rectum and had been brought down to meet the portion of rectum left at the anus. There not being time for the more complicated methods of anastomosis, the Monsel method was resorted to. Some days after the operation a fistula was established at the point of anastomosis and has continued ever since. There is a ring of dense tissue where the anastomosis was made and it is still in doubt whether this is due to a recurrence of the carcinoma or to inflammatory tissue. On the whole, however, the Monsel operation has not proved a very satisfactory one. In the discussion Dr. Tuttle said that Dr. Berg's experience with the Monsel operation is but a repetition of his own and he has tried it in five cases. In all of them a stricture occurred at the point of anastomosis. In three of Dr. Tuttle's cases fistula developed. In five other cases of carcinoma of the rectum of almost the same character as those operated on by the Monsel method, the Murphy button was

used and in no case did a fistula result, nor was there any sign of a stricture. Dr. Tuttle is thoroughly discouraged as to the use of the Monsel anastomosis in these cases.

Oophorectomy for Mammary Cancer.—Dr. Brewer presented for Dr. Lilienthal a case of recurrent carcinoma of the breast the progress of which has seemingly been stopped by removal of the ovaries. The patient, a woman about forty years of age, was admitted to Mt. Sinai Hospital last fall and on September 26th a complete Halsted operation was done for cancer of the breast. Notwithstanding the fact that the glands in the axilla and in the supraclavicular regions were removed and both pectoral muscles excised, recurrence took place very rapidly. The patient was readmitted to the hospital on January 21st with nodules of recurrent carcinomatous tissue all along the line of the scar. Her general condition was very poor. Cancer cachexia had developed and the case seemed absolutely hopeless. As a last resort it was resolved to do Beetsen's operation, namely, the removal of the ovaries, in the hope of preventing the further development of the cancer. Dr. Mundé did the operation. Convalescence from it was uneventful and the patient's condition at once began to improve. She gained in weight, her color became better, and the cancerous nodules lessened in size and in consistency. They have not entirely disappeared, but the condition of the woman is so much better than it was that the effect of oophorectomy is little less than marvellous.

In the discussion Dr. Manley said that three years ago a patient came to him suffering from mammary cancer. She absolutely refused operation and the tumor was removed by caustics. It returned although not nearly so rapidly as might have been expected. Some months ago her condition had become so bad that he suggested oophorectomy. The suggestion was accepted. The operation was followed by a very prompt amelioration of the general condition and by great lessening in the size of the tumor at the points of recurrence. The tumor did not, however, disappear and it is doubtful what the ultimate result will be. After the oophorectomy, small doses of thyroid extract were given as originally recommended by Beetsen. The broken-down tissues promptly healed under its administration, although it is doubtful how much is to be attributed to the thyroid medication.

Dr. Coley said that the improvement noted in Dr. Lilienthal's case is the same as that which has been noted in a certain number of cases in England. Radical cure has, however, never been reported after this operation in any hands. The procedure seems to act as does the ligation of an important blood-vessel to the part in which the tumor is growing. The tying of the carotid, for instance, lessens the size of malignant tumors of the parotid region so much and relieves bothersome symptoms to an extent that for a time makes it seem to be absolutely curative in effect. After the establishment of the collateral

circulation, however, the malignant tumor takes on again its old growth and proceeds to a fatal termination. Of Cheyne's two oophorectomies for mammary cancer, in one there was slight temporary improvement, in the other absolutely no effect on the neoplasm was produced by the operation. Beetson's theory is that somehow cancers originate from the ovary. Needless to say this is contradicted by the opinions of all pathologists and clinicians.

The Conjoined Tendon.—Dr. Joseph A. Blake discussed the structures involved in inguinal hernia and elucidated the confusion which has arisen from the fact that two very different portions of tissue have in recent years been called the conjoined tendon by different sets of writers. In America when we speak of the conjoined tendon we generally mean the combined fibers of insertion of the internal oblique and the transversalis muscles into the pubic bone. This structure is never very wide. In 25 selected muscular subjects it proved to be always less than five-eighths of an inch across, while, as a rule, it is less than one-half an inch in width and sometimes is a very insignificant bit of tissue lying along the rectus muscle at its pubic insertion. The other structure which has been called the conjoined tendon is the transversalis fascia or aponeurosis. It is to this structure that Bloodgood and Halsted refer when they speak of the obliteration of the conjoined tendon in cases of direct hernia in which there is a large opening into the belly cavity. This use of conjoined tendon is sanctioned by Quain. It has led to no little confusion since the structure we call the conjoined tendon usually here in America is so weak that it may be neglected entirely in the radical cure of hernia.

Sterilization of Catgut.—Dr. C. A. Elsberg demonstrated a new method of sterilizing catgut. The use of catgut in surgery has been not a little curtailed by the fact that this substance is so difficult of sterilization. Dr. Elsberg's method takes advantage of the principle that the chemical reagent which precipitates a substance from its solutions will not dissolve or affect that substance at other times. Ammonium sulphate is used to precipitate albumin from its solutions. Theoretically at least, then, it might be expected not to effect the albumin of catgut. Experiments have proved that the theoretical principle holds in practice and that catgut may be boiled for long periods in a solution of ammonium sulphate without its quality or tensile strength being interfered with. In practice the method used is as follows: The catgut is immersed for from twenty-four to thirty-six hours in a solution of alcohol and ether in order to remove all fatty matters. It is then wound in a single layer on glass spools and boiled for ten to thirty minutes in a saturated solution of ammonium sulphate in water. The saturated solution of ammonium sulphate boils at 106° to 108° C. This is from 220° to 226° F. After boiling the spools of catgut are removed and as a certain amount of the

ammonium sulphate from the saturated solution has been deposited on them, they are plunged for a minute or two in sterile water, or in some antiseptic solution that removes the salt. The catgut does not swell up during the boiling, is not changed in appearance at all, does not lose in pliability, nor in tensile strength. On the contrary very fine catgut seems to become stronger through the boiling process to which it is submitted. Catgut so treated is absorbed from the fourth to the eighth day. A series of observations made with commercial catgut shows that it is always sterile after five minutes of boiling. Experimentally catgut was deliberately inoculated with ordinary pus micro-organisms with other germs and with anthrax spores. Pus micro-organisms were always killed by three to five minutes of boiling and anthrax within five minutes. The catgut may be chromicized to suit the convenience of the operator. If it is desired that the gut should resist absorption for long periods it need only be immersed in the solution of chromic acid which the operator's experience has taught him to be suited for the purpose. The boiling in ammonium sulphate may then be continued just as before and the result will be the same.

Advantages of the Method.—The boiling process may be repeated as often as is desired. Catgut can be thoroughly sterilized in a few minutes. The process is extremely simple and not costly. Chemically pure ammonium sulphate can be bought for fifteen to twenty-five cents a pound. While in the various alcohol methods the low boiling-point at which sterilization is accomplished made the result dubious, the high boiling-point of the saturated solution of ammonium sulphate makes assured the destruction of all micro-organisms. Absolutely no apparatus is needed for the sterilization, test-tube or a laboratory beaker being amply sufficient. If the catgut after the removal of all the fatty material in it has been kept stored for some time in a two-per-cent. carbolic-acid solution, it can be gotten ready for use in from two to five minutes.

In answer to a question Dr. Elsberg said that more than a dozen different kinds of catgut from various makers had been experimented with by this method, all of them responded equally well. None of them were rendered brittle or inflexible and all of them were absolutely sterilized. Heretofore in hospitals the purchase of the finer grades of catgut has made no inconsiderable item of expense. These finer grades have been purchased because they could be more assuredly sterilized. No little saving can be effected by this simple method of sterilization.

In discussion Dr. Brewer said that he had used catgut sterilized by Dr. Elsberg's method at Mt. Sinai and at the Charity Hospital. He has been very well satisfied with it and is persuaded that this method of sterilization is a distinct improvement in the preparation of catgut for surgical work.

Dr. Joseph Blake said that the sterilization of

catgut by this method is more assured because the heat is applied in the presence of moisture and so the great sterilizing factor, the hydration of the chemical elements of the bacteria, is brought into play. Under the old methods boiling in alcohol, etc., there is no hydration. Commercial catgut is often perfectly sterile. In fact, most samples are germ-free. Catgut might be used for long periods without causing infection and yet the method of sterilization has very little to do with that happy result. Old methods of sterilization certainly are distrusted by many operators. This thorough boiling at a temperature of nearly 110° C. leaves no doubt, however, of the production of absolute sterility.

In closing the discussion, Dr. Elsberg said that Arpad Gerster had used catgut prepared in this way in an extensive operation for the removal of the breast, 150 ligatures being employed and proved to be absolutely sterile. It has been used also by him in a number of herniotomies. There seems every reason to think that the sterilization has been absolutely successful in all cases.

REVIEWS.

A Manual of Medicine. Edited by W. H. ALLCHIN, M.D., Volume I. General Diseases. The Macmillan Company, New York, 1900.

PRACTICALLY all of the articles in this book are written by specialists. Dr. James Cantlie, Lecturer at the School of Tropical Medicine, writes the articles on Cholera, Plague, Leprosy, and Beriberi. Dr. Sydney Monckton Copeman writes the articles on Variola and Vaccinia. Dr. German Sims Woodhead writes the article on the infections, Sappremia, Septicemia and Pyemia. In general, this first volume shows that an earnest effort is to be made in this latest manual of medicine to present the various topics of modern medical science in a thoroughly up to date fashion. Volume I. contains 435 pages to which there are over twenty contributors. Nearly all of them have already attracted attention by well-known contributions to the special subjects which they write. The book will undoubtedly have a place despite the number of text-books in general medicine that are constantly being issued. The publishers are to be congratulated on adopting the smaller form, 8 x 5 1/4 inches, which makes the volume really a handbook, rather than the larger, more usual, form which is so cumbersome.

Archives of Neurology and Psychopathology. Vol. II., Part 3, 4. Studies in Epilepsy. L. P. CLARK, M.D.

CLARK has presented a clinical study in epilepsy, practically composed of three distinct articles more or less correlated.

The first paper deals with the phenomena of exhaustion paralysis in epilepsy. The author's views are in greater part a confirmation of the existing theories upon the subject formulated by Jackson, Robertson, Todd and Gowers. Gowers

has especially emphasized that paralytic states may be seen in epileptics without seizures preceding the phenomena, and has urged the theory of inhibition as an explanation for such paralyzes, but Clark maintains that all paralytic states are preceded by cortical motor discharges and consequently are all post-paroxysmal exhaustion phenomena. It is a matter of some regret that careful pathological data on a few of the cases which this author has observed are not embodied in this section of his clinical studies and in this way render the subject much more complete.

The second paper of the study is upon paramyoclonus associated with epilepsy, a rather rare phenomenon. This paper, aside from giving a review study of the cases already on record, is chiefly interesting because of the addition of a case by the writer showing ergograms, during the taking of which paroxysms of paramyoclonus occurred. The handwriting of a paramyoclonus case is well shown here.

The third paper treats of the rare occurrence of hypertrophic muscles and bones in paralyzed parts, seen in the cerebral palsies of infancy. The author reports two new cases occurring in his experience, one with athetosis and one without athetosis. The author seems to have proved that the present existing athetosis theory for the hypertrophy of paralyzed parts must be discarded.

Transaction of the Chicago Pathological Society, May, 1897, to June, 1899. Volume III. American Medical Association Press, Chicago, 1900.

THIS volume constitutes a really noteworthy contribution to American scientific medicine. The members of the Pathological Society of Chicago are evidently intent on sincerely aiding the progress of medicine in its modern development. The papers on the central nervous system, the ductless glands, the digestive system, and on the skin are especially worthy of preservation. The preliminary report on hepatic cirrhosis in the guinea-pig, produced by inoculation with a bacillus, is a very interesting timely contribution to an extremely important subject. The paper is by Dr. Weaver and in the discussion of it Dr. Hektoen said that Dr. Weaver's results are in a measure duplicated by a bacillus of the pseudodiphtheria group with which he has recently been experimenting. Two cases of blastomycetic dermatitis are reported. This affection has been passing unchallenged as lupus vulgaris. It is most interesting to note that Dr. Coates reports that in his case the lesions were clinically and histologically those of epithelioma.

The Anatomy of the Brain. A Text-Book for Medical Students. By RICHARD H. WHITEHEAD, M.D., Professor of Anatomy in the University of North Carolina. Illustrated with Forty-one Engravings. F. A. Davis Company, Publishers, Philadelphia, New York, Chicago.

THE subject matter is presented in this small and handy volume in four chapters. The Divis-

ions of the Encephalon, The Surface Anatomy of the Encephalon, the Internal Anatomy of the Encephalon and the Conducting Paths of the Encephalon. For those who desire a small book, with few well-digested and, for the most part, accurate statements bearing on the general anatomy of the brain, this book will be found serviceable. We would not think of using it while such standards as Gray, Morris and Gerrish are in use by every medical student.

The Ophthalmic Patient. A manual of Therapeutics and Nursing in Eye Disease. By PERCY FRIDENBERG, M.D., Ophthalmic Surgeon to the Randall's Island and Infants' Hospitals; Assistant Surgeon, New York Eye and Ear Infirmary. New York: The Macmillan Co., 1900.

THIS is a clearly-written and agreeably-printed book on the care of eye patients. Beginning with the construction of eye wards, it takes up the subject of ophthalmic therapeutics, aseptis and antisepsis, arrangements for operations, and bandaging and after-treatment. It will prove valuable to the nurse and the house-surgeon and may be read with interest by the older practitioner, since it treats in detail of many neglected minor points which, being taken for granted by authors, are commonly omitted from the ordinary text-books on ophthalmology.

International Clinics. A Quarterly of Clinical Lecturers in Medicine and Surgery. Edited by HENRY W. CATTELL, A.M., M.D., Philadelphia. J. B. Lippincott Company, Philadelphia, 1900.

THE present volume of the "International Clinics" appears under new editorial management. Certain very noticeable changes have been made in the book. The first fifty pages are given up to what may be called military medicine. Dr. Flexner treats of medical conditions existing in the Philippines. Dr. Louis F. Atlee gives the experiences of a naval surgeon in the Philippines. Dr. Henry Lamotte discusses camp management. Dr. Victor C. Vaughan treats of typhoid fever at Chickamauga in 1898. All of these articles are extremely interesting, but scarcely seem to deserve a place in a magazine devoted to clinical medicine and supposed to be practically helpful to the general practitioner.

The Section on Therapeutics contains some excellent articles. Those on the therapeutics of cacodylic acid and its derivatives by Professor Armand Gautier and on the treatment of carbuncle by Dr. Reynier are especially suggestive.

Other distinguished contributors to this volume are Professors Brieger and Lassar of Berlin, Professor Dieulafoy of Paris and Professors Wilson and Morton of Philadelphia. The article by Dr. James Clifton Edgar on obstetrical prophylaxis and gynecology appeared in the MEDICAL NEWS some months ago and was illustrated by several plates which we miss from this reprint.

The last one hundred and fifteen pages of this volume are taken up with a review of the

progress of medicine during the year 1899 by the editor himself and Dr. N. J. Blackwood. This part of the volume is excellently written. In fact, it proves such interesting reading that one is tempted to think there must be room for a brief yearly review like this, but when we consider that to so important a subject as the whole of medicine only thirty pages can be given, while the review of surgery for a whole year has to be crowded into fifteen, we realize how superficial must be the treatment of the various topics. Much longer works are handicapped by the necessity for compression. We can scarcely hope, then, that these hundred pages of a review of the entire field of the medical sciences will prove a useful addition to medical literature.

The Surgical Diseases of the Genito-Urinary Tract. Venereal and Sexual Diseases. A Text-Book for Students and Practitioners. By G. FRANK LYDSTON, M.D. The F. A. Davis Company, Publishers. Philadelphia, New York and Chicago.

ONE of the interesting features of this work is the personal element which is apparent almost from cover to cover. The author's opinions, mostly substantiated by the majority of present-day observers, at times most charmingly fallacious, are expressed with a didactic clearness, which is lacking in many of our compilations of note. There is a general easy conversational style throughout the book, which renders it agreeable and withal profitable reading.

The book is ample in proportions and discusses most of the diseases and disorders that are common to the genito-urinary tract, laying especial emphasis on the surgical modes of treatment. The author's discussion of stricture is especially complete, as are also the chapters on syphilis. The section on sexual disorders is well presented, although this is hardly up to the standard of other parts of the book, especially from a bibliographical point of view, the subject of hermaphroditism being treated largely after the "straw man" order. Diseases of the bladder and kidneys are considered in full.

The practical note is struck throughout and there are many suggestions that will prove of much value in the treatment of all diseases of this portion of the human anatomy, for in a sense the title is misleading. The publishers are to be congratulated on getting up a book which is much above their usual standard, when judged from a purely mechanical point of view.

For Chronic Prostatitis.—

B Ichthyol 3ii—3v
Ol. theobrom 3iss.

M. Ft. Suppos. No. xxiv. Sig. Insert one suppository into the rectum in the morning after stool and in the evening. If defecation occur a second time, use another suppository. The symptoms of painful defecation, sense of weight and disturbances of micturition will be favorably affected as the prostate decreases in size and induration.—A. Freudenburg.